

SOUTH AFRICAN BIRD-LIFE



BY
HAAGNER AND IVY



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SKETCHES OF
SOUTH AFRICAN BIRD-LIFE



Robert H. Inry. A. H. Rogers

SKETCHES OF
SOUTH AFRICAN
BIRD-LIFE

BY

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Third and Revised Edition



ILLUSTRATED BY THE CAMERA

T. MASKEW MILLER
CAPE TOWN

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PREFACE TO THE THIRD EDITION

It has been found necessary to make a few alterations in the scientific names of some of the birds in accordance with recent discoveries, and some additional species have been added to those already described in the second edition; we have also added another ten illustrations. We are indebted to His Worship Cr. C. W. Giovanetti (Mayor of Pretoria) for the gift of the picture illustrating the Black Vulture, the work of his late son (Lieut. Giovanetti, R.A.F.), who made the supreme sacrifice during the Great War.

To the public of South Africa who have been good enough to make a third edition necessary, we tender our thanks.

A. K. HAAGNER.

R. H. IVY.

NATIONAL ZOOLOGICAL GARDENS,
PRETORIA.

INTRODUCTION

EVERY one knows what a bird is! Whether it be an Ostrich, a Canary, or a Barn-yard Fowl, we immediately distinguish it as a bird by its covering of feathers, if by nothing else. Birds form a separate "class" of the Vertebrate Sub-kingdom of animals, and agree with the mammals in possessing a four-chambered heart and hot blood. In addition to their covering of feathers they are characterised by the fact that they produce their young from eggs laid by the female (a point that is however shared by most reptiles, and by several of the lower mammals), and that the forelimbs, in the shape of wings, are usually adapted for flight. Their bones are moreover usually rendered lighter by being partly hollow and filled with air; in addition they have a number of "air-sacs" within their bodies which are also of assistance in flight. Lastly, all modern birds are toothless, at least as far as actual or *true* teeth are concerned.

The majority of the members of the avian world are notable for their graceful form, and their power of being able to transport themselves through space with ease and rapidity, a fact which enables them to travel enormous distances.

Birds are, comparatively speaking, perhaps better known and have attracted more notice than any other group of animals, the beauty of the plumage of many of them, the gift of sweet song with which others are endowed, their economic value which is only now meeting with anything like the recognition it deserves, have all tended to bring this about.

Birds form the great division or "class" of animals termed "Aves," which class is divided into "families," these again into "genera," and the last into "species."

They are divided by Dr. P. L. Selater, F.R.S., &c., in a paper in the "Ibis" for 1880, "On the Present State of the Systema Avium," into the following groups or orders :—

CLASS AVES.

Sub-class Carinatae (with a keeled sternum).

- Order 1. PASSERES (Crows, Starlings, Weaver-Birds, Finches, Larks, Sunbirds, Shrikes, Warblers, Thrushes, Fly-catchers, Cuckoo-Shrikes, Drongos and Swallows).
- „ 2. PICARIÆ (Woodpeckers, Barbets, Honey-guides, Trogons, Colies, Kingfishers, Bee-eaters, Rollers, Hornbills, Hoopoes, Swifts, Nightjars, Cuckoos and Plaintain-eaters).
- „ 3. PSITTACI (Parrots).
- „ 4. STRIGES (Owls).
- „ 5. ACCIPITRES (Falcons, Kites, Buzzards, Eagles, Hawks, Vultures and Secretary-Bird).
- „ 6. STEGANOPODES (Frigate-Birds, Pelicans, Cormorants, Darters, Gannets and Tropic Birds).
- „ 7. HERODIONES (Hérons, Storks and Ibises).
- „ 8. ODONTOGLOSSÆ (Flamingoes).
- „ 9. ANSERES (Geese and Ducks).
- „ 10. COLUMBÆ (Pigeons and Doves).
- „ 11. PTEROCLETES (Sand Grouse).
- „ 12. GALLINÆ (Game-Birds, Guinea-Fowl, Francolin, Quail).
- „ 13. HEMIPODII (Three-toed or Button-quails).
- „ 14. FULICARIÆ (Coots, Moorhens, Rails and Finfoot).
- „ 15. ALECTORIDES (Cranes and Bustards).
- „ 16. LIMICOLÆ (Thickheads, Coursers, Plovers, Sandpipers, Snipe and Jacanas).
- „ 17. GAVIÆ (Skuas, Gulls and Terns).

- Order 18. TUBINARES (Albatrosses, Shearwaters and Petrels).
,, 19. PYGODES (Divers and Grebes).
,, 20. IMPENNES (Penguins).
 Sub-class Ratitæ (Sternum without a keel).
,, STRUTHIONES (Ostriches).

We have heard Europeans assert that there are few birds in South Africa! Did these individuals go to any trouble to prove or disprove their allegations? As a matter of fact South Africa teems with bird-life of a varied and interesting nature; even the most uninviting stretches of flat, dreary-looking veld have their share, for here we find larks, pipits, chats, bustards, lapwings and coursers, besides an occasional owl or hawk.

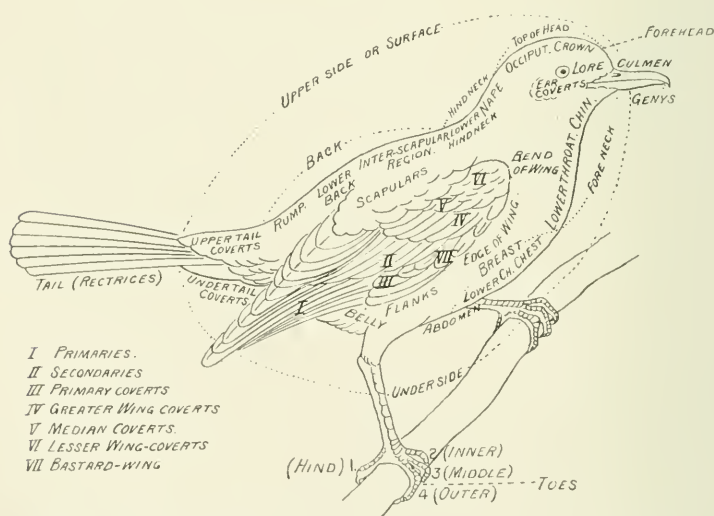
South Africa is a large country in which the topographical and climatic aspects are greatly diversified, and bird-life is accordingly often very "localised" in distribution and variety. A bird may be common in one district, yet twenty or thirty miles away this same species may be quite scarce.

Ornithology—and indeed most sciences excepting engineering, mineralogy and one or two more—have been neglected in South Africa, and it is only during recent years that any real interest has been evinced in this delightful study, beyond the limits of the few enthusiasts and professionals engaged in its pursuit. This is all the more surprising when we take into consideration the fact that there is such an immense field for good and original work amongst the fauna of this country, by reason of this very neglect on the part of our predecessors. With the exception of the late A. D. Millar, Austin Roberts and the Authors, there are very few South African born students who have taken the trouble to verify and extend the discoveries of le Vaillant, Victorin, A. Smith, Burchell and Mr. Ayres, and others of the old "pioneers" of South African ornithology.

With the help of the photographs in this book it should not be difficult for any one to recognise and determine a fair proportion of the members of the South African avifauna, without having recourse to the task of skinning. The latter is, however, learnt with a little patience and practice, and will be found indispensable to any one taking up the study of ornithology in earnest.

Notes on habits, coloration of soft parts, contents of crops, dates, &c., should be carefully entered in a book kept for the purpose.

For information on skinning we would direct attention to a little work of Rowland Ward's, 166, Piccadilly, London, called the "Sportsman's Handbook"; and for further and more scientific information on our birds, the four excellent volumes on Birds by Dr. A. C. Stark and W. L. Selater in the "Fauna of South Africa" series, must be consulted.



The Nomenclature of the External Portions of a Bird's Anatomy
 (after Reichenow),

NOTE

The large majority of the illustrations in this work are from photographs *from life* by my friend, ROBERT H. IVY, late of Grahamstown, now resident in Pretoria, whose name appears on the title-page. Where this is not the case, a note to the effect is added.

I am responsible for the text.

ALWIN HAAGNER.

PREFACE TO THE SECOND EDITION

It is now more than five years since the first edition of this work appeared.

It has been found necessary to add to the meagre descriptions of some of the birds and to add many species omitted in the previous edition. We have done this owing to the fact that the work has been kindly approved by the Transvaal Education Department and added to their list of authorised books.

We have to thank Mr. M. J. Nicoll for the loan of several blocks from his "Three Voyages of a Naturalist," illustrating the chapter on Seabirds, and to Mr. R. Chambers for the photograph of the Breeding Colony of the Cliff Swallow.

A. K. HAAGNER.

R. H. IVY.

TRANSVAAL ZOOLOGICAL GARDENS,
PRETORIA.

PREFACE TO THE FIRST EDITION

THIS is more in the nature of a popular than a scientific book, as it is specially written with a view to increasing the love for bird study in South Africa. At the present time the country's inhabitants show a considerable lack of knowledge where their own flora and fauna are concerned, and there are but few ornithologists in South Africa. The want of a work such as this has been frequently expressed, and we have, therefore, attempted to fill the gap.

Although essentially a *popular* work, it embodies the results of many years of patient study by the authors, in consequence of which we hope that other students of bird-life will find in it something original and of interest. Our chief difficulty has been to know where to stop; what to include, and what to omit. In this matter we had perforce to be guided, to a considerable extent, by the illustrations we possessed. We have tried to be short and concise, yet accurate. We are, however, fully aware that fault may be found with our method of treatment, which is based largely on the habits of the birds.

By referring to the systematic index the relative position of a bird in ornithological classification can be easily determined.

We have included a few personal experiences, with the object of making the book, from a *popular* standpoint, more interesting.

Our best thanks are due to Dr. Duerden for kindly advice, and to Doctors Gough, Kirkman, and Robertson, and Messrs. Millar, Draper and Pym, for the loan of photographs; and to the Council of the South African Ornithologists' Union, for the loan of several blocks.

To the students of African ornithology this work is respectfully dedicated by

THE AUTHORS.

DYNAMITE FACTORY,
MODDERFONTEIN, TRANSVAAL,
September 1, 1907.

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SKETCHES OF SOUTH AFRICAN BIRD-LIFE

CHAPTER I

SCAVENGERS OF THE VELD

VULTURES AND RAVENS

SOUTH AFRICA fortunately possesses quite a number of species of the Vulture tribe, the commonest of which is generally known as the *Gyps kolbii* of ornithologists and the Aasvogel of the Boers.

Birds with an unprepossessing appearance and an evil smell, they are, nevertheless, exceedingly useful in clearing the veld of carrion. During the rinderpest and similar epidemics among live stock, the Vultures were of great utility in clearing off the putrid remains of bovine herds. Even these birds, plentiful as they were, could not cope with the number of cattle that were dying, or had to be shot, and which were buried in hundreds. The Vultures' feast ; what a sight ! Yet it has its interesting side.

During the year 1890, both this Vulture and the White-necked Raven (*Corvus albicollis*) were common in the neighbourhood of Grahamstown, and no sooner was a dead horse or other animal dragged out to one of the kloofs than Ravens and Vultures could be seen winging their way to the spot from all quarters of the horizon. Judging by the way they follow one another, we feel convinced that they locate

the carcass more by sight than from any sense of smell. The Ravens were always the more fearless and the first to arrive. Within an hour there would be between fifty and a hundred Vultures circling in mid-air, or sitting on the boulders around the carcass, waiting until there was no apparent danger. Meanwhile, the more fearless Ravens were making an excellent meal. As soon as the Vultures feel confidence in their safety the carcass is attacked *en bloc* and a tearing and rending of flesh, flapping of wings and screaming ensues.

During the rinderpest the Vultures were in the habit of gorging themselves to such an extent that they could just manage to drag themselves to the water—if any was near—have a drink and vomit up everything, then return and gorge again. They were often so completely gorged with the putrid flesh that they could barely move and could easily be knocked over with a stick. We often attempted to ride them down when in this lethargic condition, but few horses will go close to a Vulture, shying violently at the grotesque figure, to which they are quite unaccustomed.

In attacking a carcass, as a rule, the eyes and tongue are picked out first.

The Aasvogel some years ago took to an entirely new departure. Grave reports repeatedly came in from farmers to the South African Ornithologists' Union and the various Departments of Agriculture, stating that the Vulture had developed a taste for fresh meat. The farmers complained of their sheep being destroyed, even full-grown ewes being killed and devoured. One reason for this change of habit was probably the increase in numbers, consequent upon the plentiful supply of food during the rinderpest, and the subsequent falling off in this food supply owing to the eradication of the epidemic. Mr. Claude Taylor gave prominence to this serious new phase in the economy of the Vulture, in the

June, 1907, number of the *Journal of the South African Ornithologists' Union*.

The South African Griffon Vulture is generally of a pale



FIG. 1.—Young Griffon Vulture in Nest (Photo. Dr. Gough.)

ashy-brown colour, the tail and primary wing feathers being black, but the coloration of the bird varies considerably, young specimens being darker and old birds being almost

white. It usually nests in krantzes (cliffs) in the Orange Free State, constructing a rough saucer-shaped nest of sticks on a ledge of rock, or on a boulder. It is sometimes placed within easy access on a rocky hillside, and sometimes on steep cliffs, where it can only be reached by means of a rope suspended from above. Years before the war we visited several such nesting sites and found them strewn with the skeletons and feathers of the Vultures. It lays one egg in July or August, usually of a dirty white colour, but sometimes marked with a few brown spots.

In the Pretoria district it also builds in trees, and the Transvaal Museum contains a huge nest of sticks, placed in the fork of a mimosa, containing a half-fledged young bird. Quite a number of these young Vultures were brought to the Pretoria Zoological Gardens from the same locality.

There is another fairly well-known species, the Black Vulture, often called the Koning Aasvogel (King Vulture), the *Otogyps auricularis* of science, which is considerably scarcer than the ordinary Aasvogel, and is seldom seen in large numbers, generally going about in pairs or in small parties of from five to seven individuals. Mr. L. E. Taylor mentions one exception, in which case he found twenty of them together at Irene, Transvaal.

This bird is apparently held in high respect by the ordinary Griffon Vulture, a fact well illustrated on one notable occasion in the Maroka district of the Orange Free State in 1894, when about twenty vultures were feeding on a dead dog. Suddenly a new arrival appeared on the scene, and the others scattered, leaving the new-comer, a solitary Black Vulture, to its lonely repast. It was a strange scene; there the bird stood wrenching off and swallowing lumps of flesh, while round him in a ring, but at a respectful distance, sat the others. As soon as "His Majesty" retired satisfied, the other

birds rushed at the carcass, and the usual fighting, flapping of wings, screaming and tearing, went on again. We have repeatedly seen how the Common Vulture stands in awe of the Black, but the above-cited case was the most pronounced and remarkable one of all.

There is a popular belief prevalent amongst the country-

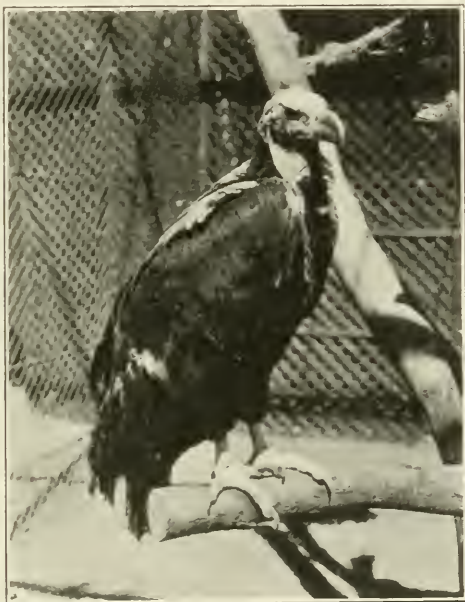


FIG. 2.—Black Vulture.

(Photo. by late Lieut. Giovanetti, R.A.F.)

folk that Vultures will not eat an animal killed by lightning, but this is a fallacy. It *may* have occurred, but we know of innumerable instances where sheep, goats and cattle so killed have been devoured, and Mr. L. E. Taylor records a case where a small flock of sheep killed by lightning were subsequently eaten by *both* Common and Black Vultures.

The Black Vulture nests in trees, building a large structure,



FIG. 3.—White-necked Raven : typical nesting site.

about 4 feet in diameter, of sticks, and laying a single egg of a dirty white colour, sometimes blotched with reddish-brown.

The African White-backed Vulture (*Pseudogyps africanus*) is a little-known bird, differing mainly from the other species in the possession of a pure white lower back and rump.

It is brown above and pale brown below. It is essentially a Tropical African species, but was found breeding in some number in June, near Potchefstroom, Transvaal, by Major Sparrow, of the 7th Dragoon Guards. Some doubt was expressed by Mr. W. L. Sclater, in his Check-list, as to the identification of the species, one specimen, forwarded to the South African Museum by A. Roberts, possessing fourteen tail feathers, whereas the genus *Pseudogyps* is characterised by the possession of twelve only. There is, however, a specimen from Potchefstroom now in the Transvaal Museum (received June 6, 1907), which is an undoubted example of the White-backed Vulture, with *twelve* tail feathers. In Northern Rhodesia this bird appears to be the common species, as the examples procured at Monze, in November, 1919, as well as those received at the National Zoo, from Pemba, were of this variety.

The last of the Vulture tribe which concerns us is the Egyptian Vulture (*Neophron percnopterus*), a much smaller bird than *kolbii* or *auricularis*, and immediately distinguishable by the bristle-like ruff on the back of the head, and by its slender beak. It is somewhat evenly distributed over South Africa, being, however, according to Major Kirby, more common in the Eastern Transvaal. There are specimens in the Pretoria Zoological Gardens from the Ermelo district.

RAVENS

The White-necked Raven breeds on a shelving rock or in a hole, on the face of a krantz in some wooded kloof,

making a nest of sticks and lining it with fibres, and hair of dassies (*Procavia*) and hares. It lays, during the months of November to January, three eggs of a bluish-white colour marked with various shades of brown.

EAGLES

Several of the Eagles feed on carrion, but as they are nothing like exclusively carrion-feeders, we shall not describe them in this chapter.

LÄMMERGEYER

The peculiar Lämmergeyer (*Gypaëtus ossifragus*) is called by the Boers the Lammervanger (Lamb-catcher), but the stories told of its attacking sheep, and even human beings, are exaggerated! They subsist chiefly on bones and carrion and reside in mountain-fastnesses, the Drakensberg Range between Natal and the Orange Free State being a favourite haunt.

The bird has a bunch of black bristles under the chin, and the general colour is ashy-black above, and bright rusty-chestnut mottled with white below. Length 44 inches.

Some of the old Boers looked upon this species as a bird of ill-omen. It derived its specific name of *ossifragus* from a popular belief amongst the ancients to the effect that the bird carried into the air bones too large to swallow, and let them fall on a rock for the purpose of breaking them.

THE MARABOU STORK

One other bird remains to be mentioned, the solemn and grotesque-looking Marabou (*Leptoptilus crumeniferus*), which, although belonging to the stork family (*Ciconiidae*), is nevertheless a true carrion feeder, its strong sharp beak enabling it to compete successfully against the Vultures and Ravens.

Although feeding largely on carrion, it also eats crabs, fish, and various insects. Andersson mentions it as a true scavenger. It does not breed in South Africa, and is a

scarce bird throughout the sub-continent except in Upper Rhodesia and the northern territories of Bechuanaland and in South-West Africa. It is unfortunately much persecuted on the Nile on account of the lovely fluffy under-tail coverts.

The head, neck and centre of breast are devoid of feathers,



FIG. 4.—The Marabou Stork. (Photo. Dr. Gough.)

the colour of the back is black, and the underparts are white ; there is a distensible pouch of naked skin below the neck. Length about 40 inches. The bird will, however, be easily recognised from the excellent portrait, taken by Dr. L. Gough of the Transvaal Museum, reproduced herein.

CHAPTER II

FRIENDS OF THE AGRICULTURIST

LOCUST BIRDS

FIRST on the list of useful birds inhabiting South Africa come the five species of Locust Birds belonging to three widely divergent ornithological groups. They are protected by law in the Transvaal.

The *true* Locust Bird, or Klein Springhaan Vogel, is the celebrated Wattled Starling (*Creatophora carunculata*). These birds belong to the Starling family (*Sturnidæ*), and follow the swarms of locusts in flocks, nesting in the vicinity of locust hatcheries and feeding themselves and their young on the young locusts, or voetgangers (walkers), as the wingless immature insects are called.

During the month of December, 1895, a flock of these birds visited the Albany Division, Cape Province, and nested close to the Chumie River, near Koonap, Mr. Ivy informed me.

There were a few single nests—these in each case measured about 2 feet by 1 foot in size—but for the most part the nests were grouped together in threes and fours in single trees. Some small thorn-trees were literally enveloped in three or four nests. There were about fifty or sixty nests within a radius of almost as many yards; within this space there was hardly a tree that had not at least one nest. Beyond the clump selected by the birds as a nesting site there were no isolated nests, although the trees extended all round. All the nests examined—about twenty—had two apertures, both on the same side. On January 20, 1906,

the birds suddenly departed, leaving a few half-fledged young, and some eggs to perish and decay.

None of the local farmers could remember having seen



FIG. 5.—Wattled or Locust Starling at nest.

these birds in the breeding season there before, although during the winter months the Wattled Starling may be found in small numbers throughout the Eastern Districts, flying in company with the ordinary Spreeuw (*Spreo bicolor*).

The Wattled Starling is of a pale drab colour, with the wing and tail feathers black. The head of the male is adorned with a wattle or two on the crown, and a lappet depending from the throat. They lay four or five eggs of a bluish-white colour, sometimes, though rarely, speckled with black.

The next two species which are also known by the vernacular name of Small Locust Bird, are the two Pratincoles (*Glareola pratincola* and *G. melanoptera*).

They are brown in coloration, with a sandy-buff throat, margined by a black ring, and white belly. The axillaries and under-wing coverts are chestnut in *pratincola*, whereas these regions in *melanoptera* are black. Length, $10\frac{3}{4}$ inches.

The Black-winged species, the commoner and better known bird, is a migrant from Western Siberia and South-west Russia, where it breeds, arriving in South Africa during September to November, and leaving again about the end of March.

These birds have very long wings, and consequently excellent powers of flight. To see a flock at work on a locust-swarm is one of the most interesting of sights. In January, 1906, at Brandfort, Orange Free State, a large flock of these birds were busy making a morning meal off a swarm of locusts. The sun had not yet warmed the insects up to a proper degree of activity, and the birds had in consequence a fairly easy time of it. Flying in a crescent-shaped flock, they would bear down on the locusts and sweep over them with the effect of putting them on the wing. As soon as this was accomplished and the insects were about 2 or 3 feet from the ground, the flock of birds wheeled with the rapidity of thought, the outer edges of the crescent converging to the centre, and enclosing the insects in a living circle. The startled locusts, in their half-lethargic condition,

immediately settled again amidst a perfect hail of dropping wings, and the birds would repeat the manœuvre.

Dr. Stark describes similar methods employed by the Wattled Starling in mid-air, differing slightly in the detail of the attack.

In the Central Transvaal we have noticed that the Pratincole is exceedingly partial to flying ants, hawking them on the wing after a rain, when these insects usually appear in large numbers. The birds' evolutions in mid-air are exceedingly graceful to watch.

Mr. Millar records having found a Colony of the Red-wing Pratincole breeding in an old land in Natal.

The fourth species of Locust Bird is vastly different from the three preceding species, being a Stork—the White Stork of Europe (the Stork of German “baby” fame)—*Ciconia ciconia* of science. It is also a summer migrant to South Africa, and is irregularly distributed over the country, being more or less dependent on the swarms of locusts which it follows. Within the last two or three years some score of birds with a metal ring on the leg, bearing a number and the name of the institution that placed it there, have been shot, or picked up dead, in South Africa, which proves conclusively that birds hatched in North Germany wander as far south as Basutoland and Cape Province. We have also noticed during the last winter or two that a few storks have wintered over in South Africa, and other observers have reported the same fact from various parts of the country. It breeds chiefly in Holland and Germany.

It is a white bird with black wings, a long red bill, and long red legs. Length, about 45 inches.

The last of the “Locust” Birds is the White-bellied Stork (*Abdimia abdimii*), a slightly glossy black bird with a white

back and white underparts. Length, about 30 inches. It is also a follower of the locust swarms, and breeds in Northern Africa.

There is no over-estimating the good all these birds do in devouring large numbers of that terrible scourge to South African agriculture, which, according to the locust officer of the Transvaal, has resulted in ever-diminishing numbers of this pest.

BUNTINGS

Starting with the *Passeres*, the Buntings are our next group of friends.

The Cape Bunting (*Fringillaria capensis*), or Streep kopje (*lit.* striped head), is a tame and confiding little bird, living amongst the rocky kopjes on the veld or on stony ridges in the vicinity of dwellings, where it creeps about amongst the crannies looking for the insects which form its staple diet.

It is rare in Albany, but is more plentiful in the North Cape Province at Cradock and in the Orange Free State; in the latter country we took many nests, some as late as March. It builds a cup-shaped nest in a low bush under a rock and lays three or four pale greenish eggs thickly marked with yellow and red-brown blotches and spots.

The bird is of a brownish tint, streaked with black above, and whitish below. The sides of the head are ornamented with four alternate black and white streaks from which it derives its Dutch name. Length, 6 inches; wing, $3\frac{1}{2}$ inches.

The smaller Rock Bunting (*F. tahapisi*) is also rare in Albany, but is fairly common in the Orange Free State and parts of the Transvaal, notably at Irene, near Pretoria. One clutch of eggs was taken at Bluekrantz, near Grahams-town, and several clutches in the Orange Free State. In each case the nest was placed in a hollow in the ground

beneath a stone on a rocky hillside ; it was cup-shaped, lined with fine fibre and hair, and contained three eggs, each of a greenish-white ground colour, spotted and blotched with

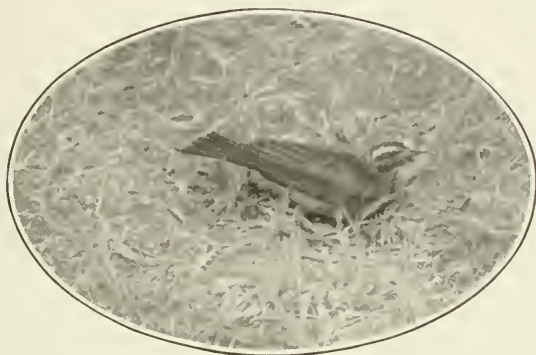


FIG. 6.—Rock Bunting.

purplish-brown and lavender. This species is redder in tone and has a darker head than the Cape Bunting. It is also smaller. Length, $5\frac{1}{4}$ inches ; wing, 3 inches.

WAGTAILS

The next family takes us to our confiding little friends the Wagtails (*Motacilla*), locally called “ Quickies ” or “ Quickstertjes,” of which South Africa possesses seven species.

Taking them in order of classification, we have first the African Pied Wagtail (*M. vidua*), which is easily recognisable anywhere by its jet black and pure white plumage. It is distributed over the greater part of Africa, south of the great desert, extending northwards into Egypt and Palestine. Its eggs are larger than those of the Cape Wagtail.

The Grey-backed Wagtail (*M. longicauda*) is blue-grey above, the wing-feathers are black and white and the underparts white with a black band on the lower throat. The tail is rather longer than that of any of the other species,

measuring about 4 inches. It is not a common bird, and is very local in its distribution. Near Grahamstown it has



FIG. 7.—Young Long-tailed Wagtail in nest.

been found breeding, and we subjoin a photograph of a young bird in its nest. Its eggs are grey mottled with brown.

The Cape Wagtail (*M. capensis*) is the common species of South Africa. It is abundant in the Cape Province, Upper

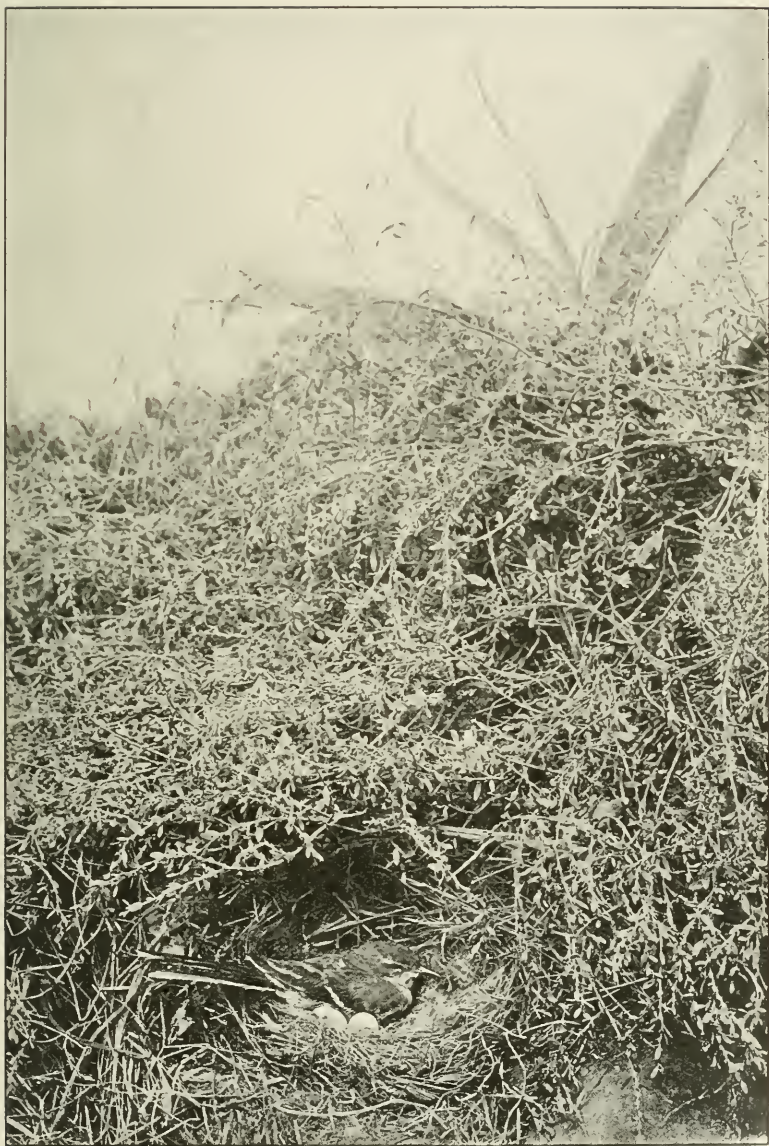


FIG. 8.—Cape Wagtail settling on its eggs.

Natal, Orange Free State and Transvaal, becoming scarce in Rhodesia and South-West Africa. The confiding little Quickstertje, in its soft grey coat, is too well-known to need any description whatever.

It is a familiar figure in the neighbourhood of any farmhouse and along watercourses, where it usually nests under a tuft of grass on the edge of the bank or on a ledge in the bank itself. We have also found the nest situated on willow stumps and in creepers growing on the side of a house. It builds a cup-shaped nest of grass lined with twine, wool, &c. ; its exterior is often of an untidy appearance, but inside it is neat and cosy. The Cape Wagtail lays three eggs of a buffish tinge thickly marked with pale brown. When incubated the mottlings often become obscure, giving the egg a general brownish tinge.

Ray's Yellow Wagtail (*M. campestris*) is a rare migrant from Europe, breeding in the British Isles and Southern Russia. We saw a single specimen on the Jokeskei River, north of Johannesburg, in December, 1905.

The Blue-headed Wagtail (*M. flava*) is olive-yellow above and bright yellow below, with a blue-grey head. It is also a migrant from Europe and Asia, ranging as far south as Natal, Transvaal and Damaraland.

The Black-headed Wagtail (*M. melanocephala*) is another European bird, but has only been once recorded from South Africa—by Ayres, from the Transvaal.

The Wagtails are true friends of the farmer, being almost exclusively insect feeders, accounting for large numbers of plant-bugs and lice, mosquitoes, caterpillars, &c.

SUGAR-BIRDS

The Sugar-Birds (*Promeropidae*), called Zuiker-vogels by the Boers—a name shared by the Sunbirds—are also real

friends of the farmer, for although subsisting largely on nectar sucked from the flowers of protea bushes and other



FIG. 9.—Cape Long-tailed Sugar-Bird at nest. (The nest, with egg just visible, is near the lower left-hand corner.)

blooms, they feed extensively on various insects. They are amongst the few winter breeders in South Africa, nesting from May to July. The nest is a deep cup of twigs, dry

grass and roots, lined with pine-needles and downy seed-heads. It is generally placed in a protea bush or bunch of heath, and usually contains two eggs, which vary from a very pale to a reddish-brown ground colour, and are sometimes marked with pencillings and blotches of black, and sometimes of brown.

The Cape Sugar-Bird (*Promerops cafer*) is of a sombre brown colour, with the vent and under tail-coverts bright yellow. The males sport long curved tail-feathers. Length of male about 18 inches, whereof the tail is 11 inches; female $9\frac{1}{2}$ inches. This species is confined to the Cape Province. The nest—a rare one in the Eastern Cape districts during recent years—can be seen low down on the left of the picture, and is rather indistinct.

The second species is a scarcer bird, and does not extend to the Cape, being only a winter visitor to Natal. It is called the Natal Sugar-bird (*P. gurneyi*), and has a shorter tail than the Cape species. Length only 11 inches, tail $6\frac{1}{2}$ inches. The feathers of the forehead and crown are of a deep chestnut-red, with pale shaft markings, whereas these regions in the Cape species are buff-brown.

SUNBIRDS

The Sunbirds are all friends of the agriculturists, but owing to their architectural skill in nest building we will include them under a more special heading.

TIT-BABBLERS

Of the Tit-babblers (*Parisoma*), the little Red-vented species (*P. subcæruleum*) is perhaps the best-known bird in its grey and white plumage, streaked throat, and chestnut-red vent and under tail-coverts. It is not uncommon in Albany Division, Cape Province, and at Irene and Aapies

River, Pretoria District, Transvaal. The Red-vented Tit-babbler builds a cup-shaped nest of rootlets and twigs lined with finer material, fibre, hair, &c., and lays three eggs of a white ground colour blotched with light and dark sepia coloured markings. It is a neat, active little bird and a true friend of the agriculturist, existing almost exclusively upon insects.

WARBLERS

The Warblers (*Sylviidae*) are a large group of more or less dull-coloured little birds, which are difficult of correct identification. They are also true friends of the farmers, but the few species we will treat of will be referred to in other chapters.

THRUSHES

The family of Thrushes, Chats, &c. (*Turdidae*), is a large one, and South Africa possesses a number of useful species, including amongst them some of our best-known birds.

First in order of classification comes the Ground-scraper Thrush (*Turdus litsipsirupa*), a bird with a pale brown back, and whitish underparts sprinkled with large pear-shaped spots of black. Length, $8\frac{1}{4}$ inches. This bird is scarce and local in some regions, although we found it not uncommon on the Modder River, Orange Free State, and also along the Crocodile River in the Pretoria Bushveld. It is fairly common in South-West Africa. Major Sparrow describes the egg as of a pale blue ground colour speckled with light and dark brown. It nests during the months of September to November.

The best known species of Thrushes in this country are the Cape Thrush (*T. olivaceus*) and its "up-country" representative, the Orange-billed Thrush (*T. cabanisi*). They are of a general slatey-olive tint on the back ; whitish throat

streaked with rufous and black : sides of body and belly orange-rufous : length about $9\frac{1}{2}$ inches. The main differences between the two species are as follows : The flanks, which in *olivaceus* are orange-chestnut, are brown in *cabanisi* ; the bill of the latter bird is wholly of a yellowish-orange colour, while that of *olivaceus* has the upper mandible of a dusky olive-green. The Cape Thrush ranges from Cape Province through Natal to Zululand, while its place is taken in the Orange Free State, Transvaal and Bechuanaland by the Orange-billed species.

The Kurrichaine Thrush (*T. libonianus*) is somewhat similar to the two preceding species, differing mainly in having the centre of the belly white and the bill bright orange-red. Length, $8\frac{1}{4}$ inches. W. L. Selater says this is the commonest form of Thrush between the Orange and Zambesi Rivers. It is common in the precincts of the Pretoria Zoo.

All three birds lay from three to five bluish-green eggs speckled and blotched, chiefly at the larger end, with reddish-brown. They build large cup-shaped nests of twigs and roots situated generally in a thick bush or tree. They feed largely on insect life, thus being useful birds, but are not above occasionally devouring fruit.

Two fairly common birds in the district of Grahamstown are the Cape Rock-Thrush (*Monticola rupestris*) and the Sentinel Rock-Thrush (*M. explorator*). Both are of a reddish-brown colour above and chestnut-red below, the Cape Rock-Thrush differing from its congener in having only the head and neck of a slatey-blue colour, whereas this coloration is continued on to the back in the case of the " Sentinel." In addition, the latter is a smaller bird, being $7\frac{1}{4}$ inches in length against 9 inches for the former species.

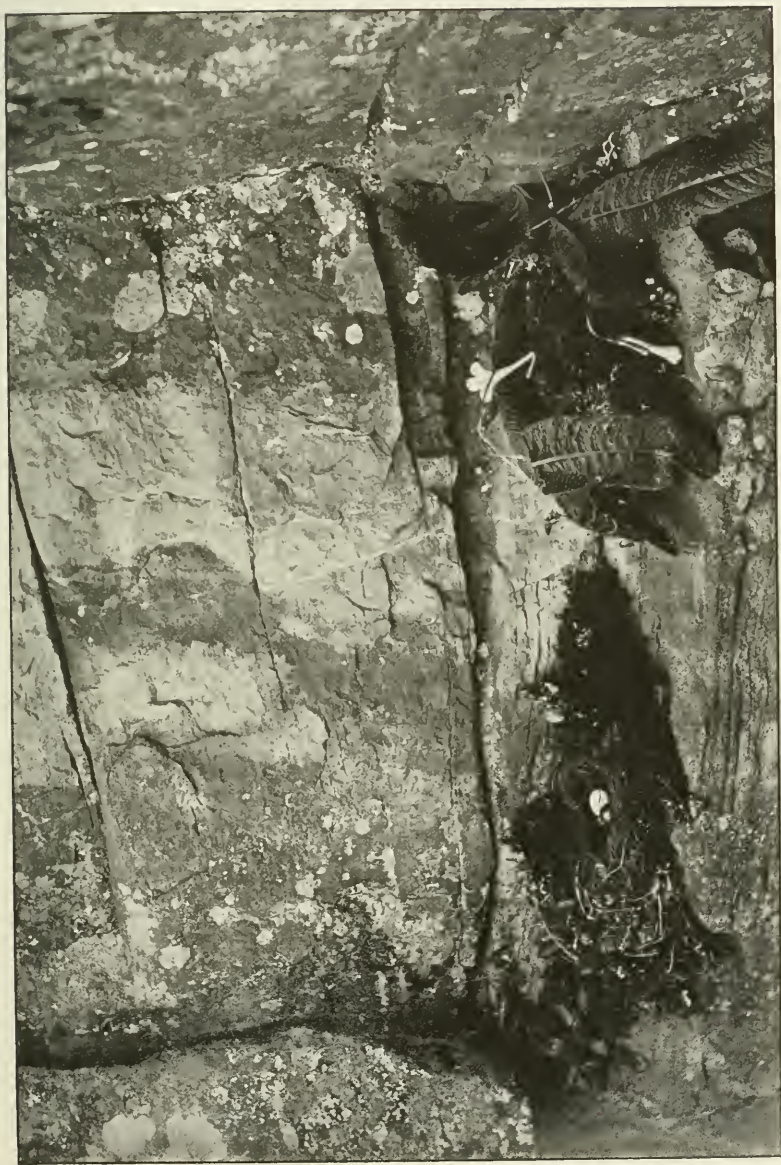


FIG. 10.—Cape Rock Thrush at nest (typical situation on Krantz). The dark egg is that of the Red-chested Cuckoo.

The young birds and the females have the head and adjacent regions coloured like the back.

Both these birds lay eggs of a very pale blue ground colour (almost white), sparsely speckled with pale rusty-brown, those of the Sentinel Rock-Thrush being smaller than those of its larger congener.

The nest is a saucer-shaped structure of sticks and roots, lined with fine rootlets and hair, and is usually situated in a hole or crevice, or on a ledge under a rock.

They have a loud, lively song, and are chiefly insect feeders, devouring large numbers of beetles, ants, plant-bugs, &c., varied by a few fruits and seeds.

One other fairly common species may be noted, the Short-toed Rock-Thrush (*M. brevipes*), from the Western region, ranging from Upington on the Orange River to Southern Damaraland and the Transvaal. It resembles *M. explorator*, but has a shorter toe. Little is known of its habits.

CHATS

A very familiar bird is the Ant-eating Chat (*Myrmecocichla formicivora*), in its sombre plumage of sooty-brown, and conspicuous white wing patches as it flutters in the air with its feeble flight. It measures about $6\frac{3}{4}$ inches in length.

It is fairly common throughout, although rather locally distributed in some parts. It is commonest on stretches of veld covered with ant-heaps, where it may be seen everywhere perched on the "hills" or at the entrance to some meerkat or aardvark (antbear) burrow.

The nest is usually situated in a hole in a burrow or in an excavation in an ant-heap, and the eggs are pure white, usually numbering three or four.

The Buff-streaked Chat (*M. bifasciata*) is a handsome



FIG 11.—South African Stone Chat, male, female, nest and eggs.

bird with the top of the head black, forehead and a long eyebrow buff-white; wings, tail, sides of face and neck, and throat black; rest of under-surface and rump region buff. The plumage of the female is much duller, being more or less of a general brownish-buff tint. Length, 7 inches.

It is fairly common in the region ranging from the Eastern Cape Province to the Transvaal. At Grahamstown, Cape Province, and Bloemfontein, Orange Free State, it is fairly common, presenting a conspicuous appearance as it sits on a rock and warbles its loud, lively song.

It is fond of rocky localities, building its nest under an overhanging rock, or in a rat's hole, and laying three or four eggs of a pale blue-green speckled with red-brown.

It feeds on insects of various kinds.

Another familiar insect-eating species known throughout the country is the little Bontrockie (*lit.* Parti-coloured Coat), or South African Stonechat (*Pratincola torquata*). The male in summer is black above except the rump regions, which are white, chestnut and white below, the black feathers taking a rufous edging during the winter months. The female is browner and more sombrely plumaged. Length, about 5½ inches.

The Bontrockie may be found flitting about the banks of a spruit (stream), or perching on the ant-heaps and stones of the open veld some distance from water.

It usually nests under a tuft of grass growing on the edge of a bank, generally overhanging water; but sometimes under a tuft of herbage on a slope some distance from the water. The eggs are usually three in number and of a pale greenish tinge blotched with pale rusty-brown.

The genus *Saxicola*, containing some well-known birds, is a large one.

The Mountain Chat (*S. monticola*) is chiefly remarkable for the puzzling phases of plumage through which the male passes—from brownish-black with the rump regions and the basal portion of the tail-feathers white, except the two centre ones (this is the plumage of the female throughout), to grey, and greyish-white with white shoulders. Length, 8 inches.

It is a common bird in the drier portions of South Africa, from the Middle and Western Cape Province northwards.

It is a lover of rocky localities, being found in the dreariest of places.

It nests under rocks or on a ledge of a bank, and lays pale blue-green eggs which are sometimes plain and sometimes speckled with reddish-purple.

The Capped Wheatear (*S. pilcata*) is the Schaap-wachter (Shepherd) of the Dutch. It resembles the Buff-streaked Chat at first sight, but can easily be recognised by its rufous-brown back and broad black chest-band. Length, $6\frac{1}{2}$ inches.

It is a tame, confiding bird and is fond of the neighbourhood of buildings and kraals. It differs from the Buff-streaked Chat in habits in preferring flat open stretches to more mountainous regions. It builds a flat, saucer-shaped nest of hair and grass in a hole, and lays eggs of a pale greeny-white colour.

This is a fairly common bird in the Brandfort and Springfontein districts, Orange Free State.

The Familiar Chat (*S. familiaris*), more commonly known as the Spekvreter (Bacon-eater), is reddish-brown above, and buffish below. It is fairly well distributed throughout South Africa, and seems to prefer the neighbourhood of farm-houses and cattle-kraals, eating bacon and fat from the

kitchen table, or grease from the wagon-wheels, whence its somewhat absurd Dutch name. It builds a nest of grass, wool and hair, under a stone or in a hole in a wall, during the months of November and December and lays three eggs of a bright blue, speckled with rusty-brown in the form of a zone round the blunt end.



FIG. 12.—Sickle-wing Chat on nest.

The Sickle-winged Chat (*Emarginata sinuata*) is brown above, shading into chestnut on the rump, and grey below, tinged with brown on the chest. It can easily be distinguished from the Familiar Chat, which it rather closely resembles, by the sickle-shape narrowing of the first primary

(i.e. the first long wing-feather), and its smaller size, being $5\frac{1}{2}$ inches long to the other's $6\frac{1}{4}$ inches. This bird is called the "Dagbreker" by the Boers (meaning Daybreaker), a name which is, however, also applied to the Familiar Chat in certain districts.

It is found in Cape Province, Orange Free State, Bechuanaland and the Transvaal. It is not uncommon in the Springfontein and Bloemfontein districts of the Orange Free State.

It nests under a rock or stone, occasionally in a wall or under a tussock of grass.

At Springfontein, where the local name for both this bird and the Familiar Chat is the "Dagbreker," we found the latter bird nesting in holes in walls, banks, outbuildings, &c., whereas the Sickle-wing was only found in the cultivated land and on the "flats" of the veld, where it nests either in an ant-heap or under a bush or tuft of grass. The nest is rather a deep cup, of dried weed-stalks and small twigs, lined with fibre and hair. The nest in the photograph was situated under a wild "Forget-me-not" on level ground and contained three eggs; on the same flat was another nest containing young, also under a weed. The eggs are usually three in number and of a light bluish-green colour, sparsely freckled on the blunt end with greyish-buff.

The White-shouldered Bush Chat (*Thammodia cinnamomeiventris*) is glossy blue-black above and below, excepting the shoulders, which are adorned with a conspicuous white patch, and the rump region, abdomen and flanks, which are chestnut. A whitish bar separates the black of the breast from the chestnut. Length, $8\frac{3}{4}$ inches.

It is fairly common on the krantzies in the Grahams-town kloofs, where it usually lays in old Swallows' nests. The normal clutch consists of three eggs which are of a



FIG. 13.—Nest of Cape Flycatcher. (Photo. A. D. Millar.)

bluish-white ground, spotted and dotted with lavender-grey and yellowish-brown. It feeds largely upon ants, flies and grasshoppers.

It is found in Upper Natal, and we met with it at Orange Grove, just outside of Johannesburg (north).

We will deal with the Robin Chats under another chapter.

FLYCATCHERS

The Flycatchers (Family *Muscicapidae*) may all be included amongst the truest friends of the agriculturist and are also dwellers of forest and bush.

The Dusky Flycatcher (*Alseonax adusta*) is an ashy-brown little bird with a white eyebrow, and is common in the wooded belts of the South-Eastern portion of South Africa. Length, $4\frac{1}{2}$ inches.

It builds a neat little cup-shaped nest covered on the outside with lichen, generally situated in a cavity or ledge on the face of a rocky krantz overshadowed by trees; sometimes in a hollow in the bark of a tree-trunk. In the neighbourhood of Grahamstown this bird has taken to building in the fork of a pine-tree or on the top of a bundle of *débris* (pine-needles, &c.) between the branches. It lays three or four eggs of a greenish colour freckled with brown and red-brown, during the months of September to December. On one occasion when encamped with Dr. Stark in a kloof, a little Dusky Flycatcher was seated on its nest in a tiny niche in the face of a rock a foot or so from the doctor's head, and although it was the first nest of this species he had seen, needless to say the confiding little bird was left in peace.

The Cape Flycatcher (*Batis capensis*) has the top of the head blue-grey, back olive-brown, tail-feathers black tipped with white; below white with a broad black band across

the chest, and the sides of the body orange-rufous. The female has no black band on the chest, the whole of the underparts being a dark orange-chestnut. Length, $5\frac{1}{4}$ inches.

This bird is a lover of thickly wooded country, and is particularly fond of the kloofs, where it builds a shallow cup-shaped nest of grass and other material, lined internally with fibre and hair and covered externally with lichen. The eggs are pale greenish-white spotted with pale brown and marked with a ring of purplish-brown blotches on the obtuse end.

The White-flanked Flycatcher (*B. molitor*), both male and female, have the flanks white, mottled with black instead of orange-rufous, the female otherwise resembling that of the foregoing species.

This bird arrives in the neighbourhood of Grahamstown about the middle of October, when its sweet simple call of three notes in a descending scale may be heard among the mimosa bushes, which it largely affects. In fact, it seems to prefer the more open mimosa scrub to the kloofs.

Its nest resembles that of the Cape Flycatcher, and is generally saddled on a lichen-covered bough of a mimosa, and is a most beautiful example of assimilative art. Its eggs are pale green, thickly spotted with brown of various shades.

The Pririt Flycatcher (*B. pririt*) closely resembles the White-flanked Flycatcher, the male differing in having the outer tail-feathers black on the outer web, these being only tipped with white; and the female in having the throat and chest suffused with *pale* orange-rufous.

It ranges from Cape Town eastwards to Colesberg and Grahamstown.

A pair found breeding in January at Blue Krantz, in



FIG. 14.—White-flanked Flycatcher with nest and egg.

the Albany Division, had constructed a nest much like those usually built by its congeners, and laid three eggs of a light blue-green, spotted all over with brown and lavender, the spots being more profuse on the blunt end, forming a fairly well-marked zone.

The Paradise Flycatcher (*Tchitrea perspicillata*) is of a



FIG. 15.—Female Paradise Flycatcher on nest.

bright chestnut colour above with the crested head, throat and sides of neck steel-green; under-surface slaty-grey, excepting the under tail-coverts, which are white. The male is adorned with a long and graceful tail. Length of male about 14 or 15 inches; female, 7 inches. From the Central Transvaal northwards this species is replaced by the

closely allied Lead-headed Flycatcher (*T. plumbeiceps*), distinguished by its plain grey head, with hardly any gloss.

Both species are denizens of forest and bush country.

At Irene we found them frequenting a thick grove of shady willow trees and poplars growing in the vicinity of the Hennops River ; they may often be seen darting at some unsuspecting insect or flitting from one tree to another with a leisurely, graceful flight.

The Paradise Flycatcher is very common in the Grahams-town Kloofs, building a neat little cup-shaped nest of grass and fibres covered on the outside with lichen and moss, which is generally fixed near the end of a branch overhanging a pool or rill.

The sitting female will allow one to approach to within 3 feet of her nest, and indeed it would even be possible in some cases to catch her with the hand.

The Paradise Flycatcher lays three pretty cream-coloured eggs, spotted with pinkish-brown, with sometimes a few additional purplish blotches.

The Spotted Flycatcher (*Muscapa grisola*) is brown above, the feathers of the top of the head with dark centres, giving this region a mottled appearance. Cheeks and a ring round the eye whitish. Underparts white, the breast and sides being streaked with brown. Length about 6 inches. This is a European bird, which migrates to India and South Africa, arriving here about the middle of October and leaving us in April. The Pretoria Zoo generally contains a goodly number in the latter month when they are on their way home.

CUCKOO-SHRIKES

The Cuckoo-Shrikes (Family *Campophagidæ*) are birds of somewhat retiring habits.



FIG. 16.—Nest and eggs of Cuckoo-Shrike.



FIG. 17.—Female Black Cuckoo-Shrike on nest.

There are two species found in South Africa, the Black Cuckoo-Shrike (*C. nigra*) and the Yellow-shouldered Shrike (*C. hartlaubi*). The male of the former is entirely glossy black, the latter has a lemon-yellow shoulder patch. The females of both birds are of a greyish colour, barred with black, the feathers of the wings and tail being edged and tipped with yellow. Length, $8\frac{1}{2}$ to 9 inches.

These birds are inhabitants of most of the forest and bush regions of South Africa, where they construct a small, shallow, saucer-like nest of fine twigs and *ptylandsia* covered on the exterior surface with grey lichen. The nest is saddled on a lichen-covered bough, which renders it extremely difficult of detection. The lining of those found by us was composed entirely of *ptylandsia*.

The eggs invariably number two, those of the Black Cuckoo-Shrike being of a light greenish-blue slightly tinged with yellow, spotted with lavender and purple of a dark shade; while those of the Yellow-shouldered species are light greenish-buff, spotted with blackish and blotched with dark and light lavender.

The Grey Cuckoo-Shrike (*Coracina cæsius*) is of a general dark bluish-grey colour, with a broad black mark between the bill and the eye. Length, $10\frac{1}{2}$ inches. It frequents the topmost branches of high forest trees.

The Cuckoo-Shrikes are very useful birds, feeding on caterpillars, locusts, and other insect pests, and should be protected as much as possible, as they are not particularly plentiful.

HOOPoes

The South African Hoopoe (*Upupa africana*) is a well-known bird in its brick-red plumage, black and white wings and fan-like crest, which it raises and depresses at will.

It is fairly generally distributed throughout the sub-continent, being a "partial migrant"—appearing and disappearing from a district at intervals.

Its cry of *poop poop* is a familiar one in the mimosa scrub, which is its favourite haunt. It affects orchards and gardens as well, where it does yeoman service in clearing off beetles, grasshoppers, grubs, &c.



FIG. 18.—South African Hoopoe near nest hole in ant-heap.

In the Eastern Cape Province it breeds during October and November, but later in the Transvaal. We have taken full clutches of eggs in November, December and even in February.

It nests in holes in trees, or, more frequently, in

ant-heaps, in holes excavated by an ant-bear in search of its food.

The eggs are very pale blue when first laid, but become a dirty pale brownish-colour when addled; from three to five form the clutch.



FIG. 19.—South African Hoopoe.

The Wood Hoopoes (*Irrisoridæ*) are represented in South Africa by two well-marked species, the first of which is the Red-billed Wood Hoopoe or Kakelaar (Chatterer) (*Irrisor viridis*). In Grahamstown it is often called the Monkey-bird, probably also on account of its chattering, noisy habits.



FIG. 20.—Wood Hoopoe at nest.

It is easily recognised by its steel-green and dark blue plumage, strongly graduated tail with white spots on the feathers (excepting the two centre), black belly and red bill.

It is found from Knysna in Cape Province, eastwards through Natal to Zululand, the Transvaal, Rhodesia, Bechuanaland, and South-West Africa.

It is essentially a forest-loving species; it may be seen hunting for insects in small parties of four to twelve individuals. Its chattering propensities are well known, and the noise a party of them create as they take wing when disturbed, is nothing short of deafening.

This bird nests in holes in trees (usually "commandeered" from some other bird), and lays three eggs of a beautiful greenish-blue, minutely and sparsely speckled with whitish pin-points.

The Scimitar-bill (*Rhinopomastus cyanomelas*) is smaller than the Kakelaar, glossy purple above and dull black below, and has a slender, very curved black bill.

It is only found from immediately south of the Orange River, northwards. We discovered them in pairs along the Modder River in the Bloemfontein District, where they may be seen amongst the mimosas searching for the insects and spiders which form their staple diet. Mr. Austin Roberts, who took the eggs of this bird on the banks of the Vaal River, near Venterskroon, informs us they were four in number and of a beautiful verditer blue colour. He discovered them in a hole in the trunk of a mimosa tree on November 9, 1904.

SWIFTS

The Swifts (*Cypselidæ*) are all exclusive insect feeders.

South Africa possesses five species, two of which are oversea migrants, one (*Cypselus apus*) from Europe and the other (*C. affinis*) from India.

The White-bellied Swift (*C. africanus*) is the largest species in South Africa, and is of a mouse-brown colour with a white patch on the throat and another on the abdomen. Length of bird, 8 inches.

Another well-known South African species is the White-rumped Swift (*C. caffer*), which is very much smaller than *C. africanus*; it is more or less black in colour, with a white rump, chin and throat. It measures about $6\frac{1}{2}$ inches in length.

This bird usually nests in old Swallows' nests and lays two elongated white eggs.

NIGHTJARS


Amongst the Nightjar family (*Caprimulgidae*), or Goatsuckers as they are more often called (the Nachtuil or night-owl), we find some of the greatest insect destroyers.

The members of this family are all of a mottled drab or brown colour and not easy of description, except by scientifically worded diagnoses. One member is a conspicuous exception, this being the beautiful Standard-Winged Nightjar (*Cosmetornis vexillarius*), which has the ninth primary wing-feather elongated to something like three times the length of the bird.

It is an inhabitant of the more tropical portions, ranging from Zululand northwards to Mashonaland and across to the northern parts of Damaraland, but has been taken at Pretoria.

In the neighbourhood of Grahamstown we should say the commonest species is the South African Nightjar (*Caprimulgus pectoralis*), of which we give two illustrations, both exhibiting the wonderful assimilative (and consequently protective) coloration possessed by these birds. In the



FIG. 21.—South African Nightjar on its eggs.  (Puzzle: Find the bird!)

large picture the bird is sitting on its eggs amongst the *débris* of leaves, twigs, &c., and can be located near the centre of the picture. Some searching will be necessary to find the bird, even in the photograph, so the degree of perfection to which the protective value of the plumage is developed in the living bird can well be imagined.

The bird sits very close and still when incubating. In the case of the photograph of the Nightjar sitting on its eggs, three exposures were made extending over a period of ninety minutes, as it was thought that the bird might

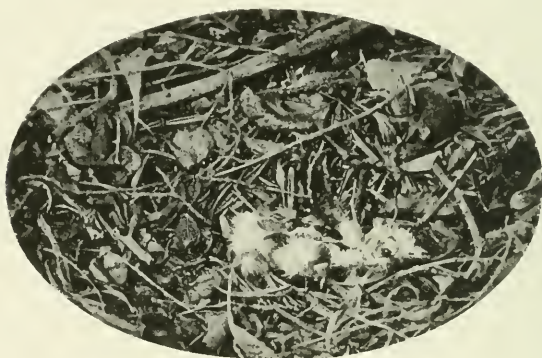


FIG. 22.—Young South African Nightjar.

assume different positions, but it remained so still that no difference could be detected in the three exposures made.

In the Central Transvaal the commonest species is the Rufous-cheeked Nightjar (*C. rufigena*), whose name serves to point out the bird's most distinguishing feature.

The European Nightjar (*C. europæus*) wends its way to South Africa during our summer.

The Nightjars lay two eggs on the ground without any attempt at nest-building, consequently the protective nature of the bird's coloration is of great benefit to the sitting parent.

ROLLERS

The Rollers (Family *Coraciidae*) are chiefly remarkable for their beautiful many-tinted plumage.

The first species is the European Roller (*Coracias garrulus*), a regular visitor to Africa, migrating as far south as the Cape. The European Roller breeds in South and Central Europe, and is blue below and cinnamon-brown above, with blue wings. In common with the next species it has no elongated outer tail-feathers. It is the only species which wanders as far south as the Cape. Length, 14 inches.

The Purple Roller (*C. mosambicus*) has a reddish-lilac under-surface streaked with white. Length, 14 inches.

The beautiful Lilac-breasted Roller (*C. caudatus*) is green, blue and brown, with the breast of a purplish-lilac tinge with white shaft-streaks, and the abdomen blue. It is easily distinguished by the lengthened outer tail-feathers, which are, however, not racquet-shaped at the ends like those of the succeeding species. This bird is not uncommon in the Transvaal bushveld. It is now protected by law in the Transvaal Province. Length, 14 inches to tip of longest tail-feather.

The Racquet-tailed Roller (*C. spatulatus*) is brown above with blue wings, and cobalt-blue below. It can be immediately distinguished by the expanded extremities of the outer tail-feathers.

The Rollers are all mainly insect feeders. They nest in hollow trees and lay white eggs. They derive their name from their curious habit of occasionally rolling or turning over while in flight.

The Cinnamon Roller (*Eurystomus afer*) is cinnamon-brown above and lilac below, with blue wings and tail. Length, 10½ inches. It is fairly common in Portuguese South-East Africa.

BEE-EATERS

The Bee-eater Family (*Meropidae*) is perhaps a better known group in South Africa, being more widely distributed than the preceding family.

The first species is the European Bee-eater (*Merops apiaster*), commonly known to the Boers as the Berg Zwaluw (Mountain Swallow). It is of a dark chestnut on the upper back, fading into pale cinnamon colour on the lower back and rump. Upper and least wing-coverts and tail green. Central tail-feathers lengthened and pointed. Throat yellow, followed by a black band and the remainder of the under-surface greenish-blue. Length to outer tail-feathers about $9\frac{1}{2}$ inches.

It is a migrant from Southern Europe and Central Asia, arriving in October or November, and is somewhat evenly distributed over South Africa during our summer, being, however, scarce in the Eastern Cape Province. They hawk their insect prey on the wing, being very partial to bees and wasps.

This bird is amongst the few northern migrants which breed in South Africa as well as in the Northern Hemisphere. Eggs were taken by Jackson, W. G. Fairbridge, and L. T. Griffin. It lays white eggs in holes bored in the bank of a donga or river (similar to the Kingfishers).

There is another migratory species from oversea, this being the Blue-cheeked Bee-eater (*M. persicus*) from south-west Asia and north-west India. This species is slightly larger than the preceding, and differs in having the upper surface of a bright green colour, the cheeks dark blue, and the throat chestnut.

The Carmine-throated Bee-eater (*M. nubicoides*) may be considered one of the loveliest of South African birds. The top of the head is green, the centre of the back and upper wing crimson, and the rump region bright cobalt-blue.

Below it is cherry-pink, except the abdomen and under tail-coverts, which are cobalt-blue.

This beautiful bird is an inhabitant of the "low" countries, and is never found elsewhere than in the neighbourhood of rivers. It ranges from Rustenburg in the Transvaal northwards to Mashonaland and the Congo.

The following account is taken from Captain Alexander's article in the 1900 volume of the *Ibis*. He met with a large flock of these Bee-eaters roosting amongst the reeds bordering the Zambesi River: ". . . Soon a great sight met our eyes. Shaking themselves free of the reeds these birds, some three hundred in number, and glorious in their feathered coats of scarlet, mounted into the air and were soon bathed in the last glows of a setting sun."

The Little Bee-eater (*Melittophagus meridionalis*) is the smallest member of the family. It is green above and orange-fawn below, with a yellow chin and throat succeeded by a narrow strip of blue, followed by a broad black band on the chest. Length, $6\frac{1}{2}$ inches.

It ranges from Natal and the Transvaal northwards to beyond the limits of South Africa. It is fairly common at Irene, south of Pretoria, where it frequents the mimosa scrub along the Hennops River. It may be seen sitting on a bush or wire fence, making occasional short darts into the air after insects.

The White-fronted Bee-eater (*M. bullockoides*) can be easily recognised from the preceding species by its considerably larger size, greyish-white forehead, and carmine-red throat. Length, 9 inches.

This bird is exceedingly common along the Crocodile River north of the "Poort" (gate), in the Magaliesberg Range (District Pretoria).

During our visit in December, 1905, we had evidently

pitched our camp close to a clump of trees which had been their regular roosting-place, and the Bee-eaters were a distinct nuisance, circling round in the gathering gloom of eventide, uttering their harsh plaintive cries, which in their monotonous insistence are apt to get on one's nerves.

We observed them sitting on the trees which lined the banks of the river, and hawking insects on the wing over the water, after the manner of swallows.

WOODPECKERS

The Woodpeckers (*Picidae*), being essentially insect-feeders, are true friends of the farmer, and as such we are



FIG. 23.—Ground Woodpecker.

glad to see they are protected in the Eastern Province of the Cape.

They lay white eggs in holes in trees bored by themselves,



FIG. 24.—Ground Woodpecker at entrance to nest hole.

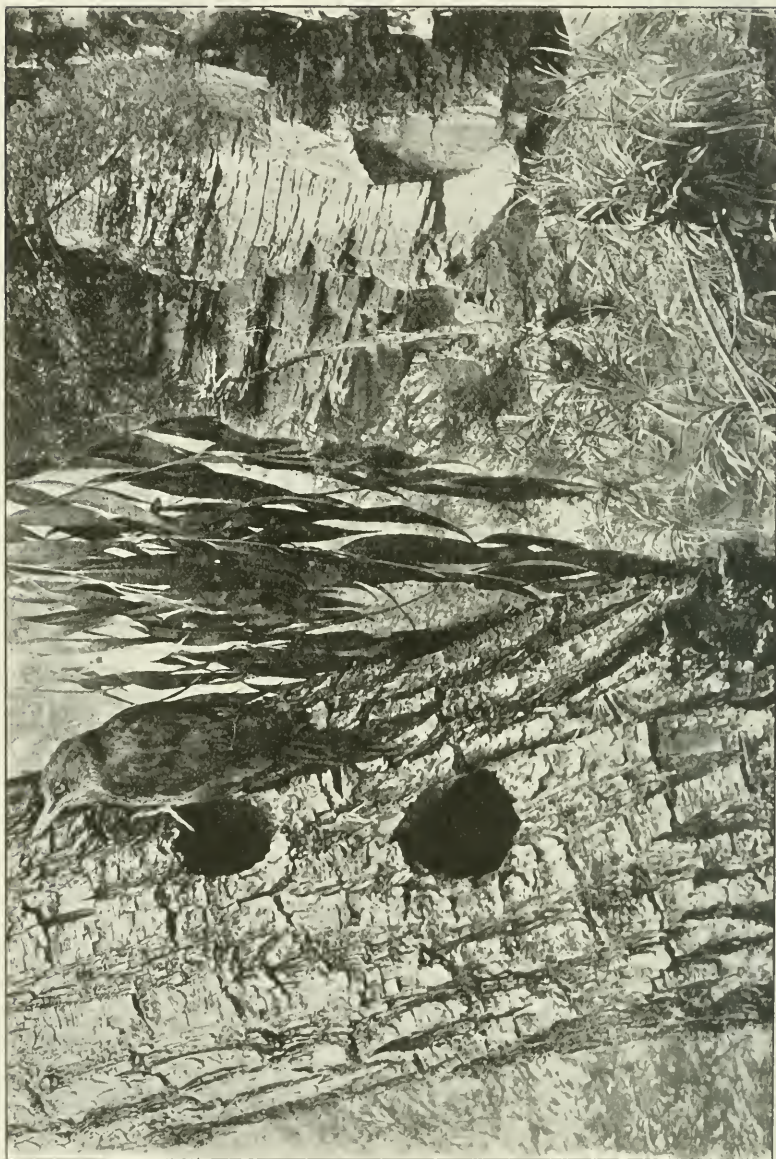


FIG. 25.—Olive Woodpecker at nest hole.

excepting a solitary instance, the Ground Woodpecker (or, more strictly speaking, "Ground Pecker"), which excavates a hole in the bank of a river, donga or cutting. We give an illustration of one clinging to the entrance of its subterranean abode. This photo was taken in the vicinity of



FIG. 26.—Knysna Woodpecker.

Carlisle Bridge, Fish River, in the District of Albany. The nest hole contained three young birds about two weeks old.

In the neighbourhood of Grahamstown this bird is plentiful on a rocky hillside just outside the precincts of the town off the road to Featherstone Valley, where its weird whistling screech can be heard in the evening.

Its tunnel usually runs straight into the bank for about

two feet, then turns to the right or left and ends in a dome-shaped cavity about 6 inches in height. The bird usually chooses a point in the bank about a foot or 18 inches below the top, where the soil is moist from surface drainage and consequently easier to excavate.

The Ground Woodpecker (*Geocolaptes olivaceus*) is olive-brown above, narrowly barred with white; rump, throat and breast washed with crimson; remainder of under parts resembling the back. Length, about $11\frac{1}{2}$ inches.

The Knysna Woodpecker (*Campothera notata*) has the top of the head crimson, back olive-green; below pale yellow thickly spotted with black. Length, $8\frac{1}{2}$ inches. This bird seems to be confined to the Cape and Natal.

The Cardinal Woodpecker (*Dendropicus cardinalis*) is the commonest and most widely distributed of the South African Woodpeckers. Hinder portion of crown crimson; back olive-brown barred with white; below greyish streaked on the breast and barred on the flanks with black. We have collected specimens at Port Alfred, Grahamstown and Uitenhage, in the Cape Province, Brandfort and Modder River in the Orange Free State, Irene, Modderfontein, near Johannesburg, and the Aapies River (Waterval North) in the Transvaal. Mr. Harry Neethling recorded it from Parys, Orange Free State.

It is a tamer bird than most of the other species, and we have frequently watched one, at a distance of only a few yards, creeping up tree-trunks with great celerity, industriously searching for insects. Length, 6 inches.

The Olive Woodpecker (*Mesopicus griseocephalus*) is fairly common in the Eastern Province of the Cape, its habits not differing materially from those of the preceding species.

It is of a plain golden-olive above, top of the head, rump, and upper tail-coverts red, throat slatey. Length, $8\frac{1}{2}$ inches.

The South African Wryneck (*Iynx ruficollis*) is of a general speckled brown colour; chin, throat and upper breast chestnut.

This bird is not common, and was formerly popularly supposed to be a migrant, but we have procured specimens during winter and summer.

The tail of this bird does not resemble those of the Woodpeckers, but is soft and pliable like those of the Passerine birds. Length, 7 inches.



FIG. 27.—South African Wryneck.

The Wryneck nests in holes in trees, laying elongated white eggs.

BARBETS

The members of the family *Capitonidæ* have stout and strong bills, thereby differing from the Woodpeckers which have a longer, thinner type of beak.

They hew holes in trees and lay white eggs like the Woodpeckers, but have not stiff and spiny-like tail-feathers.

The Black-collared Barbet (*Lybius torquatus*) is perhaps the largest member of the family. It is brown above with

fine yellow speckles ; head and throat scarlet ; back of head, a collar round the neck, and upper breast black. Below, yellow marked with greyish-black blotches and streaks. Length, $7\frac{1}{2}$ inches.



FIG. 28.—Black-collared Barbet at nest hole.

Its range extends from Grahamstown (where it is not uncommon) to the Zambesi Valley.

Although an insect-feeder it will occasionally eat fruit. We took its eggs in the neighbourhood of Grahamstown and at Modderfontein, Transvaal. Its call is a peculiar loud trumpet-like sound consisting of several notes.

The commonest of the South African species is the Pied Barbet (*Tricholaema leucomelan*), which is also fairly generally distributed excepting in Mashonaland and Natal.

It is smaller than the preceding bird, has the crown red and the plumage black spotted with yellow; throat black and rest of under-surface whitish. This bird has a conspicuous eyebrow and a black streak through the eye, below which is a broad white stripe. Length, $6\frac{1}{4}$ to $6\frac{1}{2}$ inches.

It is exceedingly common at Aliwal North, Cape Province, where it frequents the gardens and scrub on the banks of the Orange and Kraai Rivers. We also found this bird not uncommon in the Albany kloofs and along the Modder River in the Orange Free State. At Brandfort, Orange Free State and the Modderfontein Dynamite Factory they are quite common amongst the mimosa scrub, where their harsh cry—something like the blare of a toy trumpet (a single note only)—may be heard at almost any time of the day.

They breed in holes excavated by themselves in soft or decaying wood—a favourite site being a moderately thick mimosa bough.

The little Cape Tinker bird (*Barbatula pusilla*) is fairly common around Grahamstown. Its yellow and black plumage with scarlet forehead, in addition to its small size—length, $5\frac{1}{2}$ inches—is enough to distinguish it from the Barbets. Its range is restricted to the Eastern Cape Province, Natal and Zululand.

The Tinker bird also breeds in a hollow excavated in a decaying bough. In the vicinity of Grahamstown, the vertical bough of a Euphorbia is a favourite locality.

The Yellow-fronted Tinker bird (*B. exoni*) replaces the above species in the Transvaal; we found it not uncommon along the Crocodile River in the Bushveld north of the Magaliesberg (Pretoria District).

It differs from the Southern variety in the possession of an orange-yellow forehead in place of the red one characteristic of *pusilla*.

The Tinker birds derive their name from their loud metallic



FIG. 29.—Cape Tinker Bird at nest hole.

call. They feed chiefly on insects, varied by a diet of berries and wild fruit.

The Crested Barbet (*Trachyphonus cafer*) has a black crest and a red rump. The mottled yellow and black plumage is also suffused with red on the sides of the face and lower breast. Length, $7\frac{1}{2}$ to 8 inches.

It is not uncommon in the region on the Crocodile River mentioned above, and appears to be fairly common throughout the Bushveld, and its habits do not differ from those of other Barbets. Its call is a rattling, creaky note, and it often indulges in peculiar contortions of the head and neck when calling to its mate.

COUCALS

The Coucals (*Centropodinae*) form a subfamily of the *Culculidae*, but differ in several structural characters, besides the important fact that whereas the latter are birds parasitic upon other birds, the Coucals build their own nests and incubate their own eggs.

There are seven species in South Africa, only four of which need concern us here. Two of these are the closely allied Black-headed Coucal (*Centropus burchelli*), and the White-browed Coucal (*C. pyimi*, Roberts). Both birds are called the "Vlei Lourie" by the Boers.

Both are rufous-brown above; the tail greenish-black narrowly tipped with white (this is not always apparent in worn specimens); below buff-white. *Burchelli* has a glossy black head, with sometimes a few white feathers in front of the eye, forming the commencement of an eyebrow; there are generally a few white shaft streaks on the neck. *Pyimi* has a dark brown head with a distinct whitish eyebrow; the nape, upper back and sides of neck are profusely streaked with white shaft lines, many of the feathers being also edged with black. Length, about $14\frac{1}{2}$ to 16 inches.



FIG. 30.—White-browed Coucal at nest

Professor Reichenow does not include South Africa within the geographical range of the true White-browed Coucal, treating this bird as a purely Tropical species.

Mr. Selater ("Fauna of South Africa : Birds," vol. iii.) says that an example in the South African Museum from Swellendam agrees in every respect with another from Mombasa in British East Africa. Dr. Gunning and the writer examined the fine series of skins of *Centropus burchelli* and *C. superciliosus* in the Transvaal Museum, and we had no hesitation in including the latter bird in the avifauna of the sub-continent.

The South African bird has recently been separated under the name of *C. pygmi* by Roberts of the Transvaal Museum.

Both species of birds have much the same geographical range, being found throughout the country in most of the Bush regions.

The Vlei Louries—as the name implies—are fond of hunting the bush along rivers and vleis, where they may be found singly or in pairs creeping about on the ground among the undergrowth. They live principally upon locusts, caterpillars and other insects, thus rendering good service to the farming community. They have a characteristic cry of coo coo coo coo coo which sounds somewhat ventriloquial.

The nest is domed, with an opening on one side, and is constructed of sticks ; it is usually placed in a thick bush not far from the ground. The eggs, three to five in number, are rather rounded in shape and pure white in colour. We give an illustration of *C. pygmi* at its nest, originally published in the *Ibis* for 1901 and wrongly ascribed to *burchelli*. The distinct eyebrow characteristic of the former is very plainly seen in the photograph. I found the nest of *C. burchelli* in a small bush growing in a reedbed on the banks of the Aapies River in the Zoo grounds in November, 1918. It contained six rounded white eggs, the shells of which were somewhat opaque.

The Black-breasted Coucal (*Centropus grilli*), called by Mr. W. L. Sclater the Natal Coucal (*C. nigrorufus*), seems to be not uncommon in the Lydenburg District of the Transvaal. It ranges from Natal through the Transvaal and Rhodesia over to the West Coast. It has the head and entire underparts black, thus differing materially from the preceding species. Mr. J. C. Ingle has recently sent us a pair collected near Pilgrimsrest, Lydenburg District. It is much smaller than *C. burchelli*.

The Green Coucal (*Ceuthmochares australis*) is easily distinguishable from all the other species by its green colour. It extends along the east coast from British East Africa to Natal; it is not uncommon in the neighbourhood of Durban, whence A. D. Millar records it as breeding in November. Length, $13\frac{1}{4}$ inches.

OWLS

The Owls (Order STRIGES) number amongst them some of the farmers' most energetic friends, notwithstanding all manner of silly superstitions attached to them, and pertinaciously believed in by the ignorant. They feed largely on mice, rats, insects of various kinds and *occasionally* on birds.

The Striges are divided into two families, the *Strigidae*, containing two species of the Barn Owl type, and the *Bubonidae*, a large group containing divers forms.

The Barn Owl (*Strix flammea*) is a bird common to Europe and Asia. Professor Reichenow, however, separated the South African bird under the name of *Strix flammea maculata*. It is pearly-grey in colour, vermiculated with darker grey and spotted with brown above; dirty white below spotted with angular drop-shaped spots of brown. Length about $15\frac{1}{4}$ to 16 inches.

It is known to the Boers as the Dood-vogel, from a popular belief that if one of these birds screeches on the roof of a house one of the inmates is sure to die.

It lays two to four oval white eggs in a hollow tree or in a hole in a wall.

The Grass Owl (*S. capensis*) is of a much darker colour than the Barn Owl, being of a very dark brown above



FIG. 31.—South African Barn Owl.

relieved by a few scattered white dots. Below white spotted with rounded dots of dark brown. Length about $15\frac{1}{2}$ inches.

This is nowhere a common bird, but has been recorded from the Cape, Natal, Basutoland and the Transvaal. We



FIG. 32.—Grass Owl

have procured specimens near Grahamstown, at Brandfort, Orange Free State and Modderfontein, Transvaal, where we have invariably found the bird haunting the "bush" and not the grass of the veld, so its vernacular name does not seem to be quite appropriate. It is, however, stated in



FIG. 33.—White-faced Owls.

"Stark and Selater" to be commonly found amongst the grass and reeds bordering streams and marshes.

The Marsh Owl (*Asio capensis*) is the first of the "eared" owls. It is dark brown above and paler below, marbled with pale brown above and mottled with white on the lower breast. Length, $14\frac{1}{2}$ to 15 inches.

It is found in the long grass growing on the banks of

spruits or rivers, and in marshes, where it usually consorts in parties of from three to six individuals. We have found them common at Modderfontein, Transvaal. It nests on the ground in swampy growth, and lays two to four white eggs.

Its food consists of lizards, mice, frogs and insects.

The White-faced Owl (*Asio leucotis*) is of a mottled and streaky grey appearance above. Facial disc white with a strongly-marked black margin behind, which is clearly seen



FIG. 34.—Young Cape Eagle Owl.

in the three individuals of our photograph. Below much like the back but of a more barred appearance ; abdomen and undertail coverts white narrowly barred with black. Length, 12 to 12½ inches. It is found from the Orange River northwards to Somaliland but, within our limits at any rate, seems nowhere very plentiful. We have seen it in the Pretoria District and the Bushveld. It lives on small rodents such as rats and mice, and insects such as locusts and grasshoppers.



FIG. 35.—Bush Owl with young at nest hole



FIG. 36.—Cape Eagle Owl and nest.



FIG. 37.—A pair of Spotted Eagle Owls

The Bush Owl (*Syrnium woodfordi*) is a thorough bush-loving species ; we found it not uncommon in the bush near Grahamstown. It extends northward to British East Africa.

The adult bird is dark brown above adorned with three-cornered white spots ; below, white barred with brown. No " ear " tufts. The young bird has the plumage shaded with tawny. It usually breeds in a hollow tree. Length, 14 to 14½ inches

The Eagle Owls (*Bubo*) are the largest of the South African representatives of the Striges and are all " cared."

The Cape Eagle Owl (*Bubo capensis*) is dark brown spotted with reddish-buff ; bill black. It measures about 19½ inches in length ; wing, 14½ inches.

It nests in old nests of other birds, or in a nest of its own construction on the bank of a river, and lays two to four pure white eggs.

It is confined to Cape Colony and Natal.

The Spotted Eagle Owl (*B. maculosus*) is smaller than the preceding bird, but like it has a black bill. Length of wing, 12½ inches. Total length, 20 inches.

It is recorded from almost everywhere and is the commonest owl in the sub-continent.

The cry of this bird is a thorough hoot, described by many as " ominous " ; it can be heard from the owl's position on the housetop—or in the bush. The senseless superstition that its cry is an augury of the death of some member of the household attaches as much to this Owl as to the Barn-Owl.

It subsists on reptiles, frogs, insects, and mice and other small mammals, and is therefore of economic value to the farmer.

It generally lays its eggs in a depression in the ground. We took several clutches of two eggs each from a nesting site on a rocky ledge in an old quarry, during the month of

October, at Modderfontein. They were rounded ovals of a pure white colour.

The Giant Eagle Owl (*B. lacteus*) can easily be distinguished from the other members of the genus by its pale



FIG. 38.—Spotted Eagle Owl.

“horn”-coloured bill and its much larger size, being 28 inches in length, with a wing measurement of about 17 inches. It has, moreover, a more “streaked” appearance than either of the preceding species. It is rarer than the foregoing in S. Africa proper, but becomes commoner north

of the Zambesi River. We procured examples near the Kafue River.

The very opposite to the preceding species is the Little Scops Owl (*Scops capensis*) which is only 7 inches in length. It is an "eared" species of a dark grey colour mottled with black, and occasional rusty markings.

We have observed it in Albany and in the Pretoria District. At Modderfontein it is a scarce bird and affects the eucalyptus plantations. It has a peculiar habit of clapping its mandibles together, making a loud clacking noise. It is almost wholly an insect-feeder.

The little Pearl-spotted Owl (*Glaucidium perlatum*) is about the same size as the Scops Owl, but can easily be distinguished by the absence of ear tufts and the characteristic mottling of the upper surface—white spots edged with black. Length, 7 inches.

It is common along watercourses, where it feeds on insects, varied by an occasional mouse or small reptile.

It ranges from the Orange River northwards, but seems nowhere common. I have seen one or two on the Sand River in the Pretoria district every winter for some years past.

KESTRELS

Amongst the *Falconidae* there are many birds which are decidedly more useful than otherwise.

The first of these useful species is the South African Kestrel (*Cerchueis rupicolus*), which is by far the commonest and best-known member of the genus.

Head slate-colour streaked with black; rump and tail slate-grey, the latter barred with black. Body of a general reddish-chestnut brown spotted with black. Length, $12\frac{1}{2}$ to 13 inches.

It is a resident and breeds either on a krantz, in old buildings, or in trees. The eggs, which are generally three in

number, are cream-coloured, spotted and blotched with various shades of brown.



FIG. 39.—South African Kestrel.

The Larger Kestrel (*C. rupicoloides*) differs from the foregoing species in being paler above, the head uniform with



FIG. 40.—“Just flown” : four young South African Kestrels.

the back and its considerably larger size. Length, $14\frac{1}{2}$ inches.

It is, so far as we can ascertain, a "partial migrant," and is spread over the greater part of the African continent.

We took a clutch of five eggs from the deserted nest of a Secretary Bird ; these varied considerably both in ground colour and in markings, but in the main resembled those of *rupicola*, being, however, a little more elongated in shape, with a narrower diameter.

The Lesser Kestrel (*C. naumanni*) is a migrant from Southern Europe, Northern Africa and Asia, where it breeds, arriving in South Africa about October.

It is smaller than *rupicola* ; the male has the head, neck, rump region, tail and wings bluish-grey ; the back of a cinnamon colour without spots ; below paler than the back, with a few scattered spots. The female resembles that of *rupicola*, but is without the blue head. Length, 12 to 13 inches.

At Irene the Lesser Kestrel is very common during the summer months, but strange to say it is only an occasional visitor to Modderfontein (some 20 miles to the south). In Albany these birds are usually very scarce, but on one occasion the Division was visited by a large flock (probably a hundred of them) which took up its residence for a week in Belmont Valley, near Grahamstown. They were in the habit of flying round in circles during the day and roosting in some high eucalyptus trees at night.

We had the camera focussed on a small dead tree which seemed a favourite perching place, with about 20 feet of tubing attached to the shutter. There were about thirty birds on the tree when a passing herd-boy cracked his whip, disturbing them before an exposure could be made. We were ultimately only able to obtain the accompanying picture



FIG. 41.—A pair of Lesser Kestrels.

of a pair. The male is in the foreground, and the female is sitting with her back to the camera.

The Eastern Red-legged Kestrel (*U. amurensis*) is readily distinguished from the other members of the genus by its dark slate-black colour and orange-red coloured legs.

It is a migrant from China and Japan, where it breeds, passing through India to South Africa.

The Kestrels are all gregarious at times, particularly the migratory species; or when swarms of locusts are passing through a district. In the latter case the Kestrels congregate into large flocks and follow the swarm, devouring large numbers of the locusts, and thus rendering invaluable aid to the agriculturist. We have also seen several of the species hawking flying ants on the wing. Besides locusts and ants Kestrels feed on lizards, mice, scorpions and spiders.

Only one solitary case of mischief against a Kestrel has come under our notice during many years of collecting and observing. In dissecting a Larger Kestrel on October 14, 1906, we found in its stomach, besides ants, spiders and a lizard, the head and fragments of two full-grown Bar-breasted Finches (*Ortygospiza polyzona*).

QUAILS

The Quails are amongst the farmers' best friends, as they feed on weed and grass seeds, insects of various kinds and locusts.

The Americans fully recognise the claims of the Quail to inclusion amongst the useful species, and in a pamphlet issued by the United States Department of Agriculture in 1905, the economic value of these birds is fully discussed. The following extract from Dr. C. H. Merriam's report admirably sums up the results arrived at: "Investigation shows the birds to be no less important in their economic than in their other relations to man. They are found to be

exceedingly valuable allies to agriculture because of the quantity of noxious insects and weed seeds they destroy, while the harm they do is insignificant."



FIG. 42.—Cape Quail, nest and eggs.

Judging from our own experience of the two species inhabiting South Africa, we should say that this is equally applicable to the local birds.

Regarding the Quail as a locust destroyer, the investigations of Mr. Thomsen, the then Chief Locust Officer of the

Transvaal Department of Agriculture, are both instructive and interesting. He considers these little gamebirds "great locust-eaters," and is rightly opposed to their being bagged in hundreds by reckless sportsmen.

The Cape Quail (*Coturnix africana*)—the Kwartel of the Dutch—does not need any description, being too well known throughout the length and breadth of the land.

It is an irregular migrant, appearing and disappearing very suddenly.

It lies very close, rising suddenly with a "whirr" of the wings, and after a short but rapid flight settles as suddenly.

It nests in long grass, or more generally in grain fields, consequently many nests are destroyed by the reapers. The number of eggs in a clutch varies from five to ten, and may occasionally be as many as a dozen; they are of a yellowish-brown or brownish-yellow colour sometimes spotted, but more generally heavily blotched with liver-brown and pale-brown.

The male of the second and last species (the Harlequin Quail—*C. delagorguei*) is easily recognisable by the black throat and bright dark chestnut under parts, relieved by a large black patch in the centre of the breast. The female has the throat white and the lower surface chestnut mottled with black.

This species is similar to the Cape Quail in habits.

A great influx into Mashonaland occurred in 1901 and 1902, an account of which was communicated to the *Proceedings of the Rhodesia Scientific Association* by Mr. Tredgold.

GUINEA FOWL

Birds of almost equal economic value in South Africa are the Guinea Fowl (*Numida*).

Here again we must quote Mr. Thomsen. In the *Journal of the South African Ornithologists' Union*, he gives a succinct account of its usefulness as a locust destroyer, asserting that not only does it devour both the mature insects and voetgangers, but it also scratches up and eats large numbers of their eggs. He instances cases in which he personally observed flocks of wild Guinea fowl surrounding and devouring swarms of voetgangers. The Guinea fowl also feeds on roots and weed seeds, besides other insect pests such as termites and the like. It is credited with doing damage to newly sown fields and to ripening crops, but the good it does probably outweighs the harm.

In its black plumage, speckled all over with round dots of white, naked head and neck and a bony helmet, it is a familiar bird to nearly every South African. The Squeakers—as the young flying birds of the year are called—are void of the helmet, the top of the head being longitudinally striped with pale rufous and dull black. The feathers of the body have also a shade of tawny here and there.

It is exceedingly common in the tracts of bush-country from the Eastern Cape Province northwards to the Zambesi. In the neighbourhood of Brandfort, Orange Free State, it is very plentiful amongst some of the mimosa belts and forms a favourite item in the sportsman's bag.

It is now also common in the eucalyptus plantations on the Rand.

In the Eastern Cape Province the Crowned Guinea fowl is a bird that will appear and gradually increase in a neighbourhood for some years, and then suddenly die out. From the examination of specimens shot, the cause of the disappearance is probably partial extermination by the Wire-worm so common in ostrich veld. About ten years ago these birds were plentiful in the immediate neighbourhood of Grahams-

town ; prior to that they had not been seen for some years. Recently they have gradually increased again. The nest photographed was taken at Belmont, and while exposing the plate several young actually hatched out. Before many hours had elapsed the whole brood had left the nest

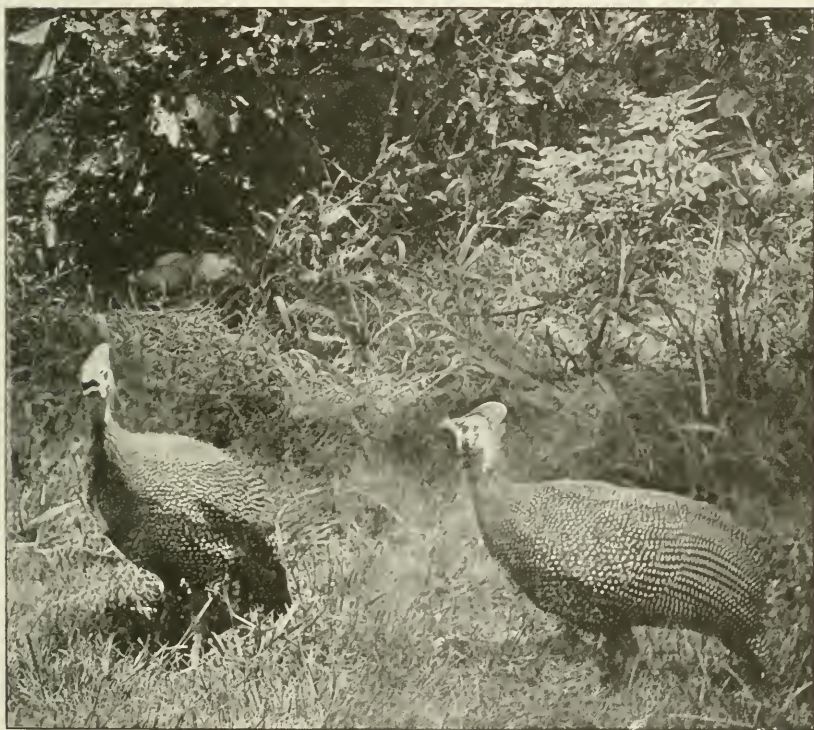


FIG. 43.—Crowned Guinea fowl, nest and eggs.

The Guinea fowl lays its eggs, pale brown in colour thickly speckled with darker pin-points, in a depression in the ground under a small bush or tuft of long grass.

It runs swiftly and does not rise very readily, consequently shooting it in thick thorn bush is often no easy

matter, as plenty of hard running and a little strategy is necessary to procure it. If the flock can be scattered and the cover is good, excellent sport can be obtained with the help of good dogs.

It takes readily to confinement and is often found on the farms in a domesticated condition.

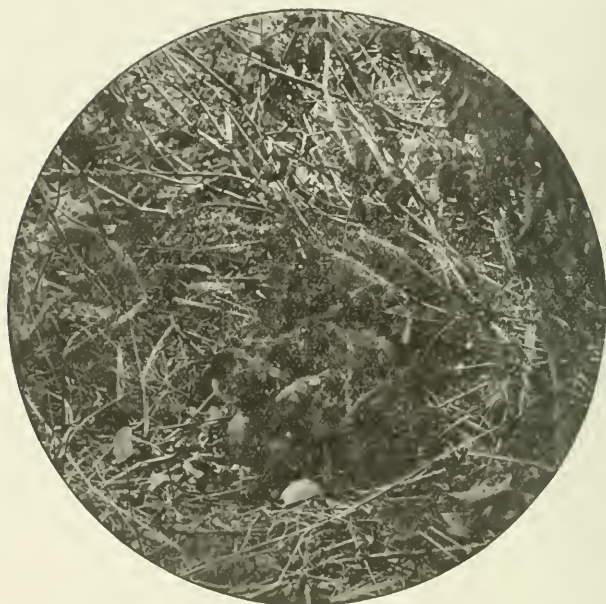


FIG. 44.—Guinea fowl Chicks hatching out.

The ordinary tame farmyard bird differs in having a white breast, white wing quills, and in its smaller size.

The Crested Guinea fowl (*Guttera edouardi*) has the very distinguishing characteristic of a large tuft of curly black feathers on the crown.

It is only found in a few of the forest districts north of Durban, whence it extends northwards to the Zambesi. It is a denizen of thick bush.

Before closing our chapter on the friends of the agriculturist, a few remarks on the protection of birds might not be out of place. Some—the Locust-birds proper—should be absolutely protected by law, but as regards the Guinea fowl, Francolin and Bustards, the question is a more difficult one. Some enthusiasts would suggest that these birds be also placed under the above enactment, but what about the “Sportsman”? He will surely protest most vehemently against such an action, and with reason.

We think that a compromise might be a rational solution of the difficulty, viz. that although these birds may be shot for *sport*, they should not be allowed for purposes of barter. They should be prohibited from the stock-in-trade of the game shops. This would in a great measure stem the tide of destruction, as no *true* sportsman would butcher birds he knew were of distinct economic value, and the few—in comparison—shot merely for sport would not make any appreciable difference.

Legislation is no doubt necessary, but to make it thoroughly satisfactory and workable the public must be educated up to a knowledge of the usefulness of our little feathered friends.

[Since these lines were penned some years ago, the Bustards, Coursers, Lapwings, and Thick-knees have been entirely protected by law on account of their utility to agriculture.]

CHAPTER III

THE FARMER'S FOES

STARLINGS

FIRST in order of classification comes the Spreeuw, or Pied Starling (*Spreo bicolor*), which is very common throughout South Africa, excepting the Natal littoral and the South-West territory.

It feeds chiefly on insects, but during the fruit season creates enormous havoc amongst the fruit crops, notably figs. They are so destructive in some districts that, unless strong measures are taken, hardly a ripe fig remains to be gathered. With a bird of this description it is exceedingly difficult to know where to place it. It has no beauty in its brown plumage (which has, however, bronzy reflections in the sun), and white abdomen, and does probably quite as much good in destroying insect pests as harm by devouring figs and other fruit. However, to the fruit farmer, and the householder who possesses a few fruit trees, it is an undoubted nuisance, so we perforce include it in this chapter.

The Pied Starling nests in holes and dongas, prospecting pits, and walls, or under stones, and lays from four to six greenish-blue eggs during the months of August to October. Dr. Stark says the eggs are occasionally marked with reddish-brown.

The Red-winged Starling (*Amydrus morio*), or Rooivlerk Spreeuw, is glossy blue-black with reddish-chestnut primary wing feathers. The female has a brownish head.



FIG. 45.—J. R. Ivy climbing to nest of Red-wing Spreeuw.

It is gregarious in habits and a great fruit thief, but feeds largely on caterpillars and insects. It builds in krantzies, laying three to five blue-green eggs marked with a few



FIG. 46.—Red-wing Starling at nest.

red-brown blotches. It has a peculiar whistle which is often emitted while the bird is flying. It has invaded the Zoo grounds of recent years, and has bred in the topmost niches of the Marks Fountain.

WEAVER-BIRDS

Amongst the Weaver-Birds (*Ploceidae*) there are several species of gregarious habits, which do a large amount of damage to the ripening grain crops. These are notably *Quelea quelea* (Pink-billed Weaver), which is easily recognised even in winter by the pink colour of the bill—the Red Bishop Bird (*Pyromelana oryx*), and the Long-tailed Widow Bird (*Diatropura procne*).

In the Maroka District of the Orange Free State and parts of Basutoland, where these birds are exceedingly common, the natives build mounds of turf sods at various points of vantage in the fields, from whence lumps of clay are thrown with switches to scare away the feathered marauders. Shouting and the beating of empty tins is also resorted to.

We will treat of them more fully under the heading of "Bird Architects."

BULBULS

The true Bulbuls (*Pycnonotus*), of which South Africa



FIG. 47.—Cape Bulbul at nest.

possesses four species, live almost exclusively on fruits and berries, so they can hardly be termed anything but

enemies of the farmer. Indeed, their depredations to the fig and apricot crops in the Transvaal are beyond forbearance, as they present themselves directly the fruit commences to ripen, and devour all those which ripen first, just as the fruit is "on the turn," and scarcely fit yet for human consumption.

These Bulbuls are the favourite hosts of the Jacobin, Black and White, and Crested Cuckoos.

Although great fruit eaters, they are the first birds to warn one of the proximity of a snake, and they consume a fair amount of insects, especially when feeding their young.

We can do no better than give an excerpt of the key by Dr. E. Hartert, in "Novitates Zoologicae" ("On the African forms of the Genus *Pycnonotus*"):—

- I. *Pycnonotus barbatus*. Eyelid feathered.
 - a. *P. b. tricolor*. South-West Africa—North to the Congo.
(Under tail-coverts yellow; crown brown.)
 - b. *P. b. layardi*. Eastern Cape Colony, northwards to Lake Nyassa.
(Under tail-coverts yellow; crown black.)
- II. *Pycnonotus capensis*. Eyelids protruding, wattle-like.
 - a. *P. c. capensis*. Southern parts of Cape Colony.
(Eyelid mostly whitish; underside brownish, paler in the middle of the abdomen.)
 - b. *P. c. nigricans*. Central Cape Colony, northwards to Transvaal in the East and Benguda in the West.
(Under-surface, except throat, whitish; crown black. Eyelid bright reddish, or "chrome-orange.")

These birds are of a general dark brown colour above and are known by various "local" or vernacular names, such as "Tiptol" in the Eastern Cape. "Geelgat" or "Kuifkop" of the Dutch, "Topknot" or "Black Head" in Natal. It is also occasionally called the "Blackcap."

MOUSEBIRDS

The Mousebirds, or Colies (Family *Coliidae*), are as bad at fruit-thieving as the Bulbuls, if not more so, and devour large quantities of apricots, plums, peaches, &c. They are gregarious in habits, going about in flocks, and are chiefly remarkable for the hair-like nature of their breast feathers,



FIG. 48.—Speckled Mousebird.

from which they derive their Dutch name of “Muisvogel” (Mousebird). They have crested heads and long tails. All three species are of much the same size.

South Africa possesses three species and a sub-species. The Speckled Mousebird (*Colius striatus*) is of an ashy-grey colour above and ashy-brown below, streaked with wavy lines of a darker tint. Bare skin round eye black. Length, 13 to 14 inches.

It ranges from the Cape Province to the Zambesi, but is not found in the Orange Free State, nor in the Western or Central Transvaal.

The White-backed Mousebird (*C. copensis*) is easily distinguishable from the foregoing bird by the centre of the back being white bordered with black, and a patch of dark maroon on the rump. This is the Western species ranging from Cape Town, touching the Orange Free State and the Transvaal, up to Damaraland.

The Red-faced Mousebird (*C. indicus*) can easily be recognised from either of the two first-mentioned species by its greyish-green colour and the conspicuous crimson skin round the eye.

The Colies nest in trees, building a somewhat frail saucer-shaped structure of sticks, which is lined—in the case of the Speckled Mousebird—with green leaves, and with grass and vegetable down so far as the other two are concerned.

In the Grahamstown District we found the Speckled and the Red-faced Mousebirds common, but in the more central portions of the Orange Free State and Central Transvaal only the Red-faced species occurs.

The latter bird lays three eggs of a creamy-white, sparingly speckled and streaked with red, which may be searched for during the months of November and December.

It is, however, amongst the Family *Falconidae* (Hawks, Eagles and Falcons) that some of the worst of the farmer's foes are to be found.

FALCONS

The first species we will deal with is the South African Lanner (*Falco biarmicus*)—a handsome, bold-looking bird of

from 16 to 18 inches in length. As a rule in birds of prey the female is larger than the male. It is dark slate colour above, with a brick-red head—the latter with black shaft streaks, the former barred with bluish-grey, below pale fawn colour.

Its range is wide, extending to Central Africa and Angola. It is a rapid and strong flyer, sallying forth from some krantz to prey upon birds, and steal what poultry it can lay its claws on. We have known it to raise almost full-grown poultry from the ground : in one case the bird would have carried off its prey (a half-grown duckling) had not a pointer dog gallantly rushed to the rescue, and leaping up caused the Hawk to drop the duckling, which escaped with a few scratches. This species has been trained for hawking by my friend, Mr. B. C. R. Langford of the Irrigation Dept., who has had three of these birds at odd times in training. One was particularly good, and of which we append illustrations.

The South African Peregrine Falcon (*F. minor*) very much resembles the English bird, the chief point of difference being its considerably smaller size.

The Red-necked Falcon (*Falco ruficollis*) has the hind neck and crown of head of a reddish-chestnut, and is cobalt-blue above, barred with narrow black stripes. The breast is of a pale chestnut, and the rest of the lower surface of a pale blue barred with black.

It is not a common bird in South Africa, but the Transvaal Museum contains a female mounted in its nest, taken near Pretoria by Mr. C. B. Horsbrugh on October 24, 1904. This has now been created a new sub-species by Dr. Gunning and Austin Roberts, who have named it *F. horsbrughii*.

The Pigmy Falcon (*Poliohierax semitorquatus*) should perhaps not be included in this chapter, but as it belongs to the Falcons I will include it here. It is an extremely

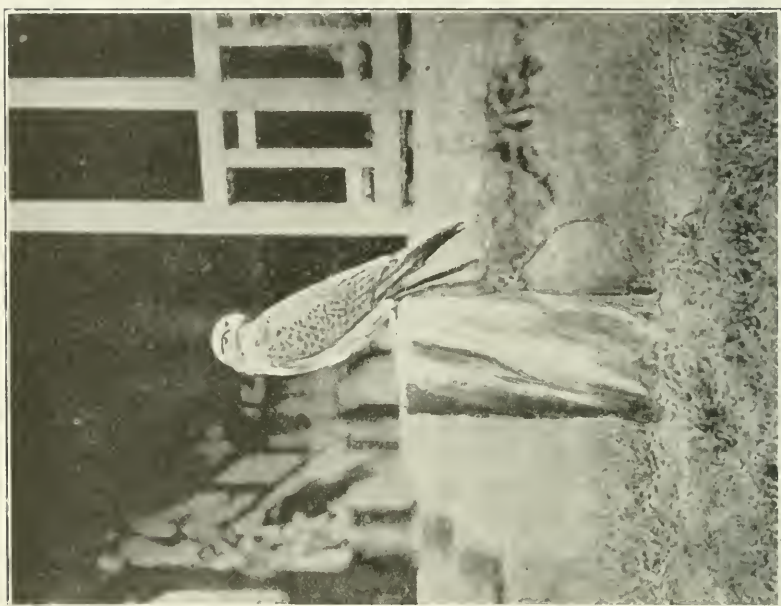


FIG. 49.—South African Lanner Falcon (*Falco biarmicus*).
(Photos. B. C. R. Langford.)

pretty, dainty little bird (not a foot long) in its bright colouring of soft grey, chestnut-red and white. It is practically harmless, subsisting chiefly upon insects and small birds. Our photograph is from a mounted specimen in the Transvaal Museum, collected at Wolmaransstad by Mr. A Roberts.

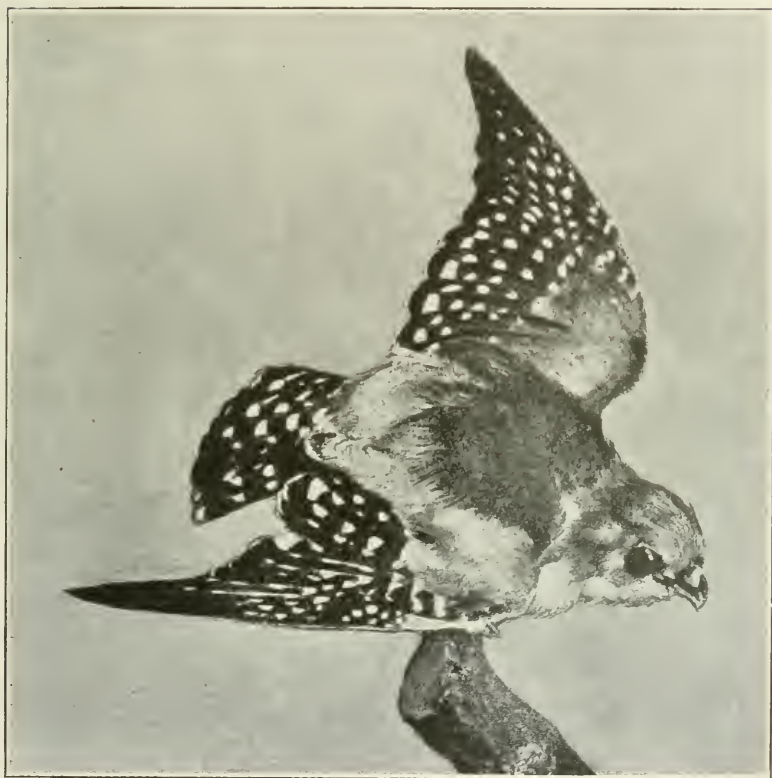


FIG. 50.—Pigmy Falcon. (From a mounted specimen.)

EAGLES

The next group is the Eagles, the first representative of which is the powerful Black Eagle (*Aquila verreauxi*), called by the Boers the Dassievanger (dassie-catcher) from its

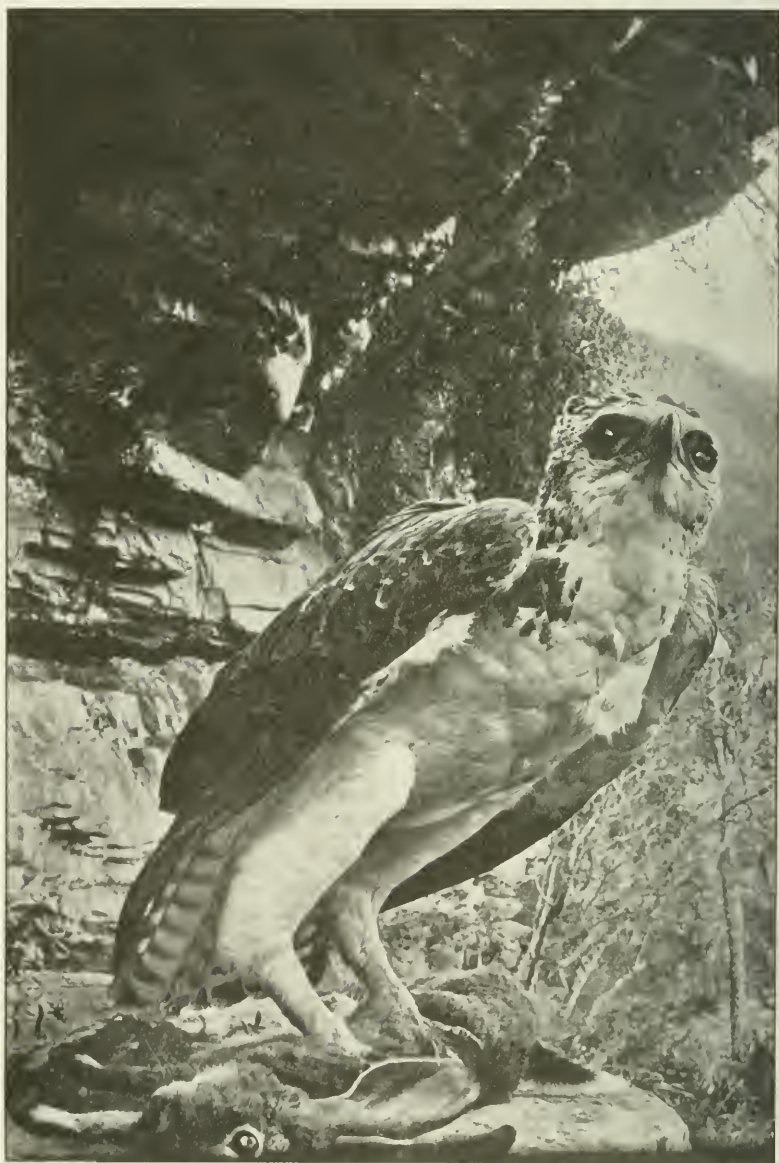


FIG. 51.—Martial Hawk-Eagle. (From a mounted specimen.)



FIG. 52.—Nest of Crowned Hawk-Eagle : collecting the eggs.

fondness for Rock-rabbits (*Procarvia capensis*). It is coal-black with a snowy-white patch in the centre of the back. It is a bird of the mountain regions, and is fairly well distributed in South Africa, including South-West Africa, but is rarer in Rhodesia. Length about 33 inches.

This handsome bird preys on lambs and kids, and even on sick sheep. It nests on high cliffs, building a huge nest of sticks, and lays, during the month of July, one or two eggs of a bluish-white colour, sparingly blotched with red-brown. Lieut. C. G. Davies, 1st S.A.M.R., gives a fine account of this bird in South-West Africa in a recent number of the *S.A. Journal of Natural History*.

The Tawny Eagle (*A. rapax*)—the Coo-vogel of the Boers—is reddish-brown above and tawny-brown below.

Like its much larger congener, the Black Eagle, it will kill and eat sheep and goats, and has also been observed devouring carrion. It nests in trees, also during winter, and its eggs resemble those of the foregoing species, but are considerably smaller. Length, 27 to 31 inches.

The Brown Crested-Eagle (*Hieraaëtus wahlbergii*) is dark sepia-brown in colour, and possesses a crest. Length, 21 to 23 inches. This bird is not uncommon on the Magaliesberg Range and the Pretoria Bushveld (Central Transvaal).

The African Hawk-Eagle (*Hieraaëtus spilogaster*) is brownish-black above spotted with white; under parts white, streaked with black. The young plumage is tobacco-brown above and reddish-fawn below. Length, 26 to 27 inches. This Eagle is very destructive to poultry.

The Martial Eagle (*Spizaëtus bellicosus*) is dark sepia above and below, except the abdominal regions, which are white spotted with brown. Length, 31 to 33 inches.

This bird is as large and powerful as the Black Eagle, and resembles it in its depredatory habits. Its chief prey

consists of the smaller antelopes, hares, and the smaller carnivora. It is very destructive to young goats and lambs. It nests in trees from June to August, laying a single white egg marked with red-brown.

The Crowned Hawk-Eagle (*Spizaëtus coronatus*) is black above (with a white-edged crest) and black below with white bands, giving the under-surface a more or less mottled appearance. It has short wings and a long tail. Length, 33 to 36 inches.



FIG. 53.—Dr. Stark and R. H. Ivy at foot of tree containing Crowned Hawk-Eagle's nest.

It attacks its prey from above, swooping heavily. This consists of various wild and domesticated animals, and includes poultry.

The nest shown to Dr. Stark near Grahamstown still exists in the large Kaffir plum tree, and is about 60 feet above the ground. It is situated in Donker Bosch on Stone Hill. The birds can be seen morning and evening soaring above their nest from any vantage point in Featherstone

Valley. We append a photograph of the nest and the adventurous method of taking the eggs. We have also much pleasure in reproducing a photograph of Dr. Stark, taken in company with Messrs. Ivy and Pym. Messrs. Stark and Ivy are each holding an egg of the eagle. When these eggs were taken a freshly-killed Blue Buck ram was lying in the nest. On one occasion fifty-eight skulls were counted on the ground beneath the nest, comprising Blue Buck, Rhebok, Stembuck and Rock Rabbit. During recent years the birds seldom drop bones below the nest.

This pair of Eagles generally raise four young each season, the young birds keeping in company with the parents until the warm months. On one occasion the female was shot, but the male found another mate within a couple of weeks, and reared a brood shortly afterwards.

The Crested Hawk-Eagle (*Lophoetus occipitalis*) is of a very dark brown colour, and possesses a long crest of eight to ten narrow feathers about 5 inches in length. Bird, 23 to 24 inches. This bird has been recorded from George, in the Cape Province northwards to the Zambesi. Like the Crowned Hawk-Eagle, it inhabits bush country, but unlike it, is of a harmless disposition, living principally on reptiles, frogs, and small rodents, such as rats.

The Bateleur (*Helotarsus ecaudatus*) is another bird which should not find a place in this chapter, but as we have included most of the eagles here, we also insert the Bateleur. This species—called by the Boers the Berghaan—is a handsome crested bird of a black colour, with the centre of the back and tail rich maroon-chestnut. The plumage of the young is dull brown. The full change from the juvenile to the adult stage takes from four to six years in captivity, but would probably not exceed four years in the wild state. It is

easily recognisable by its very short tail, and in its adult stage by its bright red legs.

It has a curious habit of turning somersaults in the air, and feeds chiefly on small animals and reptiles.

BUZZARDS

The Jackal Buzzard (*Buteo jakal*) is fairly common throughout South Africa. It derives its name from its howl-like cry, which somewhat resembles that of the Black-backed Jackal. General colour, dull black, with a red patch on the breast and reddish tail. Length, 21 to 23 inches.

During the month of October, 1901, we found a nest in a euphorbia at Bluekranz drift near Grahamstown. It was cup-shaped, rather shallow, about 20 inches across the top, and composed outside of very coarse, and inside of smaller dry sticks; all the lining discernible consisted of a few sprigs of green leaves and a bunch of *Ptylandsia* (Old Man's Beard-moss). At the end of July, 1902, a second nest was found at Fernside Kloof, also near Grahamstown. This nest had, however, been built by a pair of Goshawks, and afterwards "commandeered" by the Buzzards, as it contained three eggs—two large white ones of the ordinary buzzard type, and a smaller egg resembling that generally laid by the Goshawk. A photo was taken with the female buzzard perched near the nest (Fig. 54). Two little downy chicks were hatched which were fed by the parents at sunset. Snakes, mice and rats and various birds seemed to be the staple fare provided. A leg and feathers of a "Bush-pheasant" (*Pternistes*) was on one occasion found in the nest. Mr. Harold Fry states that a pair discovered by him in Natal fed their young largely upon spiders and insects, such as grass-hoppers, &c.

Mr. R. H. Ivy relates that ten days were spent in trying



FIG. 54.—Female Jackal Buzzard at nest of South African Goshawk.

to obtain a photograph of the parent birds at the nest with young, but they invariably left before sunrise and returned after sunset, when the light was far too faint for a "snap" exposure. The camera was fastened quite close to the nest on a neighbouring bough with 40 feet of tubing attached. Nevertheless, photographing the Buzzards was no easy matter, as the infuriated birds seemed intent on either damaging the camera or our heads, and we had to make most energetic demonstrations to keep the enemy at bay. Many attempts were made to obtain a decent exposure and our adventures were numerous. On arriving at the nest one morning we saw a huge leopard crouched on the tree not far from the nest, and on our approach it slid to the ground and glided—a flash of yellow—down the kloof. On another occasion, when bird's-nesting in Bluekrantz Gorge, a leopard descended from a tree close to us in the same manner; the lowest branch could not have been less than 40 feet from the ground, and the animal came down with a crash, but without a jump; the claw-marks were distinctly visible on the bark to within 3 feet of the ground. On one occasion, while endeavouring to obtain an exposure in a high wind, the camera being lashed to a swaying bough, one of the birds made a vicious swoop at young Roy Ivy, who had been left in the tree to make the exposure, and carried off his cap. The two chicks were finally removed by us, but one of them died when about three months old. The other grew to maturity and was liberated in the yard, but was soon given away owing to its vicious nature. It killed and devoured two tame owls, and a large number of fowls and ducks before it was got rid of. Colonel Abdy, of the Royal Artillery, took us out to a nest in Baviana's Kloof, near Hatherley, Pretoria District, which was placed on an inaccessible ledge on the face of a krantz. It contained two downy young ones.



FIG. 55.—Young Jackal Buzzards in nest.

These birds are demons, so far as the farmer is concerned, stealing any poultry they can get hold of.



FIG. 56.—Jackal Buzzard (adult). (From a stuffed specimen.)

There is another species of *Buteo* (*B. desertorum*), the Steppe Buzzard, which is also fairly well known. It is of a general pale brown colour above, with darker “shaft

streaks " and a patchy white mark on the nape of the neck. Below dark brown, with the abdomen irregularly mottled with white. The young bird is paler above and below, and has the feathers of the upper surface edged with paler. Length, 20 to 22 inches.

It is a bird with a very wide range, migrating from Southern Europe and Western and Southern Asia. In the Transvaal it is far from uncommon, and several examples, in both young and adult stages of plumage, were obtained on the Modderfontein Dynamite Factory, in the neighbourhood of one of the dams.

These birds are, as Distant states, very partial to telegraph poles, but may often be seen perched on a fence pole in a somewhat sleepy condition, allowing one to get quite close ere taking flight. When hunting the flight is somewhat sluggish. Small birds, insects and lizards seem to be the staple diet, but an occasional chicken or duckling does not come amiss.

KITES

The Yellow-billed Kite (*Milvus ægyptius*) is a migrant from North Africa and Arabia. It is a sepia-coloured bird with a grey forehead and throat, and a strongly forked tail. Length about 21 inches. According to Major Stevenson Hamilton, the Game Warden of the Transvaal Game Reserves, its Dutch name of Kuikendief (Chicken-thief) is not merited, as his experience of them is that they do not steal poultry. Be that as it may (we cannot verify or contradict this *in toto* ; we have seen them hawking and devouring locusts), it has a bad reputation amongst the populace. The nest is either placed in a tree or in a krantz, and the eggs are white, blotched and streaked with blood-brown.

The Black-shouldered Kite (*Elanus cæruleus*), the Witte

Sperwel of the Boers (occasionally also called the Blaauw Valk), should, perhaps, not find a place in the present chapter, as it is by far more useful than harmful; in fact, we know of very few authentic cases where the present species



FIG. 57.—Black-shouldered Kite.

can be accused of thieving. The farmers will tell you it is a fearful chicken thief, but they may confuse it with several other species. It feeds mainly on mice and rats, reptiles and insects, varied by an occasional small bird or chicken.

It is slate-grey above, with the basal half of the wings black, the remainder of the wings being like the back ; black in front and behind the eye ; lower surface white, tinged with blue-grey on the breast. Length, about 12 inches.

It builds a rough, saucer-shaped nest of twigs in a mimosa or other likely tree, and lays three to five eggs of a pale green ground colour, speckled and blotched with various shades of reddish- and purplish-brown.

We found it breeding at Modderfontein, Transvaal, and Grahamstown, Cape Province.

SPARROW-HAWKS

The Sparrow-Hawks are represented in South Africa by four species, only two of which are fairly common birds.

The Little Sparrow-Hawk (*Accipiter minullus*) is slatey-black above ; below, white barred with narrow brown bands edged with reddish. Length, $9\frac{1}{2}$ to 12 inches.

It is a small but fearless little bird, loving the bush-regions, where it nests in a tree in the kloofs. It may often be found resting on a little ledge high up on the face of a krantz in one of the kloofs near Grahamstown. For years it has nested here, and may thus be seen in the locality, although never actually on the nest (which is in a tree close by) when any one is about.

Small as the bird is, it will attack chickens, descending with an oblique swoop. It lays three eggs of a white ground colour, thickly blotched with brown and purplish. It is generally distributed over the more wooded portion of the Sub-Continent.

The African Sparrow-Hawk (*A. rufiventris*) is dark slate above and chestnut below, excepting the chin, throat and under tail-coverts. Length, 13 to 16 inches. It is not uncommon in the Albany District, and feeds chiefly on mice,



FIG. 58.—Red-breasted Sparrow-Hawk.

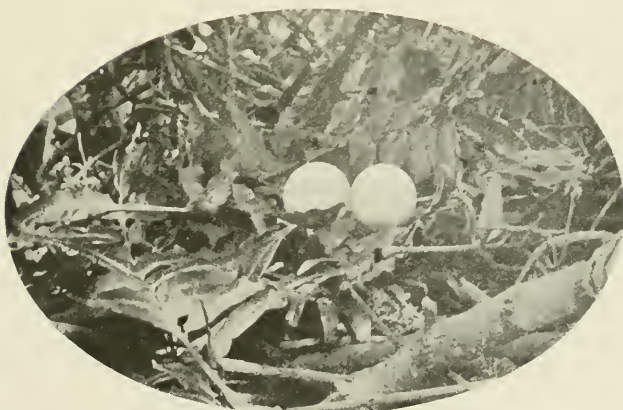


FIG. 59.—Nest and eggs of African Goshawk



FIG. 60.—Female South African Goshawk near nest.
(The bird is still in partial immature plumage.)

insects and birds, &c., and is also a destructive bird in the poultry yard. This species is not uncommon in the Cape and Natal, but it is scarcer in the more northern territories.

The African Goshawk (*Astur tuchiro*) is of a dark slate above and white below, narrowly barred with brown. The young bird is browner above and has the under parts covered with large drop-like spots of dark brown. Length, 15 to 17 inches.

The nest is composed of coarse sticks, &c., placed on a bough of a Kaffir plum or other forest tree. The nest in the photograph was visited by us on four or five occasions, and each time we found it freshly lined with the leaves of the tree in which the nest was built. It contained two creamy-white eggs on November 15.

It is a forest-loving species and a great poultry thief.

A fairly common species in the Central Transvaal is the Little-banded Goshawk (*Astur polyzonoides*), which is only $11\frac{1}{4}$ inches in length. It is blue-grey above and white below, transversely barred with brownish. Although it feeds largely upon mice and lizards and even locusts, it will catch and devour small birds, and should really be excluded from this chapter.

CHAPTER IV

BIRD ARCHITECTS

THE first group under this heading is the large family of Weaver-Birds (*Ploceidae*), which are divided into three sub-families :—

- (1) *True Weavers* (*Ploceinae*) ; (2) *Waxbills* (*Estrildinae*) ;
- (3) *Widow- and Bishop-Birds* (*Viduinæ*).

TRUE WEAVERS

The commonest and most widely distributed member of this sub-family is the Masked Weaver (*Hyphantornis velatus*). This bright yellow bird with olive-yellow back, black face and throat, is a well-known figure along most of the South African water-courses. It builds a kidney-shaped nest of grass, beautifully woven, with the entrance hole at the bottom. There is usually a bar across the inside of the nest next the aperture to prevent the eggs from rolling out. The nest is either hung between two or three reeds, or else suspended from the drooping branches of a tree, usually a weeping willow. We have even found the nest amongst mimosa scrub away from water, although the usual site is in the immediate vicinity of water of some description. In spring, when these birds are busily engaged in constructing their nests, the reed-beds and willow-trees are pretty scenes of colour and activity. The wild, weird song indulged in by the males is a very pleasing sound to the South African. The Masked Weaver lays eggs which vary very considerably

in colour, being either plain white, plain blue-green, bluish-green spotted with reddish-brown and grey, or cream colour with dark brown and reddish-brown spots.

The Spotted-backed Weaver (*H. spilonotus*) is the commonest form in the south-east of the Cape Province,



FIG. 61.—Nests of Masked Weaver-Bird. (Photo. E. H. U. Draper)

being exceedingly common in the Albany kloofs. It resembles the Masked Weaver in colour, differing in having the back of a spotted appearance, owing to the feathers being black tipped with yellow. Length, 7 inches. Like the foregoing bird, it nests in colonies, but generally suspends its nest from trees or bushes overhanging water. The eggs vary almost as much as those of the Masked Weaver, but the markings are of a more speckly nature.

There is a smaller species—length, $5\frac{1}{2}$ inches—resembling the Masked Weaver (*H. auricapillus*), but of a more brightly tinted yellow, which is found in the Pretoria Bushveld, northwards to the Zambesi. We discovered it to be fairly plentiful along the Crocodile River, north of the Magaliesberg range, where it was nesting in colonies in the willow and other trees overhanging the river. The nests appeared to be smaller than those of the Masked Weaver.

The Yellow Weaver (*H. subaureus*) has no black on the head, and breeds principally in the reed-beds, constructing its nest of strips of the leaves of reeds.

The Bottle-Weaver (*Sitagra ocularia*) resembles the Masked Weaver, but has only the throat and a streak through the eye black. Length, 6 inches. It is fairly common in the forest districts of the east of the Cape Province. It constructs a wonderful nest woven of grass—in the vicinity of Grahamstown it is usually of a tough red fibre—shaped like a retort, with a long neck which is frequently several feet in length. The eggs are three in number, and of a white ground colour, sometimes spotted with pinkish- and sometimes with purplish-grey. They build occasionally in the open bush away from water and are not gregarious in habits, residing usually in pairs.

The Cape Weaver-Bird (*S. capensis*), and its Eastern and Northern representative (*S. c. caffra*), has no black throat. It is a large bird, and builds a fairly large nest, generally overhanging water, and is either suspended from a tree or between reeds.

In the Central Transvaal we have found it nesting in colonies amongst the eucalyptus trees growing in the vicinity of water, where it suspends its nest from the lower branches of the trees.

It lays bright greenish-blue eggs.



FIG. 62.—Nest of Bottle Weaver-Bird. (Photo. A. D. Millar, Durban.)

It is fond of sucking the pollen from flowers, and the feathers of the forehead are often caked with the saccharine juices.



FIG. 63.—Cape Weaver-Bird at nest.

The Forest Weaver (*S. gregalis*) is rusty-black above and golden-yellow below.

Its habitat is from Algoa Bay to Zululand.

This bird is *not* gregarious as its name would indicate, being found in pairs in the thickly wooded kloofs, where it suspends its untidy retort-shaped nest, woven of fine tendrils of creeping plants, high up over a pool or rill of water. Although coarsely constructed, the nest is compactly woven and can be crushed together like a Panama hat without materially damaging it. Fresh eggs may be

taken from October to the end of December, according to the season. These are invariably of a whitish colour thickly spotted with pale rusty-red.

This bird has a wild, weird song, containing many sweet



FIG. 64.—Nest of Forest Weaver-Bird.

notes, and is not in our opinion harsh or creaking, although it has a chirping call which is rather harsh and somewhat unique. It is called the Bush-musician, or Bos-musikant in the vernacular.

The Red-headed Weaver Bird (*Anaplectes rubriceps*) has the whole head and throat, breast and upper back of a

scarlet-red ; the lower back and adjacent regions grey ; the tail-feathers darker grey edged with yellow. Lower surface white, excepting the sides of the body, which are grey. Length, $5\frac{3}{4}$ inches. The female is grey above and white below, the head, neck, and upper chest being tinged with pale orange. This pretty species ranges from the Eastern and Northern Transvaal to Nyassaland, but is nowhere exactly common. It builds a rough retort-like nest, somewhat like that of the Bottle Weaver, and lays blue eggs.

The Buffalo Weaver Bird (*Textor niger*) is a black bird with a red bill, measuring about $9\frac{1}{2}$ inches in length. The female is browner in colour with a whitish throat. It ranges from the Eastern Portuguese territory through the Transvaal and South Rhodesia to the regions of Lake Ngami and Damaraland. This bird builds a large untidy nest of twigs and sticks, some half-dozen pairs uniting to build such a nest, in which openings are left to serve as receptacles for their eggs and roosting-places. The eggs—3 to 4 in number—may be looked for in December, and are greyish-white, streaked with grey and brown.

The White-browed Weaver (*Ploceipasser mahali*) is a light brown sparrow-like bird with a black head and a conspicuous white eyebrow.

It is an extremely common bird around Brandfort, Orange Free State, where its loud, peculiar warble may always be heard amongst the mimosa scrub.

Here, too, they construct their large, untidy nests of grass stems, with two entrance holes below ; one is stopped up during the breeding season, but is opened for the winter months, when the nest serves as a roosting-place. We have seen as many as ten or twelve nests in a single tree.

The eggs are white, shaded with pink, and blotched and streaked with pinkish-brown.

This bird is not found south of the Orange River valley.

A pretty little species is the Scaly-feathered Weaver (*Sporopipes squamifrons*), which is light brown in colour, with the feathers of the forepart of the head black margined with white, giving to this portion a scaly appearance. It is a small bird, being a little over $4\frac{1}{4}$ inches in length, and ranges from Northern Cape Province northwards to Rhodesia.

It is very common in the mimosa scrub along the Modder River and in parts of the bush-veld of the Central Transvaal, building an untidy dome-shaped nest of grass, woven with the ends projecting in all directions, and lined with the flax-like flowery heads of grasses and feathers. It lays four or five eggs in autumn: these are bluish-green in colour, thickly streaked and blotched with brown and reddish-brown.

Like nearly all Weavers, it lives on grass seeds varied by a little insect food.

WAXBILLS

The Sub-family *Estrildinae* is a large one containing many pretty little birds, some being well known to every South African, while others are scarce and little known.

The South African Ruddy Waxbill (*Lagonosticta rubricata*) in its crimson and brown plumage is a pretty little bird, as also is its dainty little relative, the Little Ruddy Waxbill (*L. brunneiceps*), with its singular twittering call which reminds one forcibly of the tinkling of a tiny silver bell. In the Central Transvaal they are especially fond of feeding on the ripening berries of the Australian pepper-tree, from the branches of which their sprightly call may often be heard. Length of the former species, $4\frac{1}{2}$ to $4\frac{3}{4}$ inches; of the latter, $3\frac{1}{2}$ inches. The nest of both species is built in a bush

usually close to the ground, and is a round, loosely built structure of grass, lined with feathers. Eggs three to five (occasionally even six), and of a pure white colour.

The Common Waxbill (*Estrilda astrilda*), more widely known in South Africa as the Rooibekje (Red-bill), is unlike the preceding species, as it may be found in enormous flocks during the autumn and winter months, searching for seeds amongst the weeds and grass in old lands, or amongst the open scrub and bush.

It has a shrill, *ping-ping* like call, and is well known in its plumage of brown back, crimson breast, and red bill. Length, $4\frac{3}{4}$ inches. It builds a large, untidy nest of grass, lined with feathers, and lays four to six eggs of a pure white colour.

The Blue-breasted Waxbill (*Uræginthus angolensis*) has the rump regions, face and under parts, except the thighs and centre of abdomen, light blue. Length, $4\frac{3}{4}$ inches. This bird is not found south of the Orange River valley. Mr. Harry Neethling found it common at Parys in the Orange Free State during April, 1907. It is common in the Transvaal Bushveld at certain seasons.

The most beautiful species of the Sub-family is the Violet-eared Waxbill (*U. granatina*), which has the top of the head, neck, breast and back chestnut-brown, the sides of the face lilac, the throat black, and the rump and tail-coverts bright blue. Length, $5\frac{3}{4}$ inches. The female is paler and less brightly coloured than the male.

They do not congregate in large flocks like most of the Waxbills, although the late Dr. Symonds, of Kroonstad, has recorded the fact of having occasionally seen them in fair numbers. I have seen them in the Pretoria Bushveld during the winter months in pairs or small parties.

The Orange-breasted Waxbill (*E. clarkei*) is sometimes called the Zebra Waxbill on account of the black and yellow barring on the sides of the body. Chin and eyebrow red ; below, yellowish-orange tinged on the chest and vent with red. Length, $3\frac{3}{4}$ inches. This bird was present at Modderfontein (Transvaal) in large flocks during the months of February and March, 1907. It was fairly common in the Pretoria District during April and May, 1920.

The Sweet Waxbill (*E. dufresnii*) is the best known species in the south-east of the Cape Province from Uitenhage to Port Alfred. It is of an olive colour above, with a grey head, scarlet tail-coverts and a black tail. The male has besides, the sides of the face and throat black. Length, $3\frac{3}{4}$ inches.

All the Waxbills are insect and weed seed-eaters, thus being true friends of the agriculturist.

They all lay white eggs in large, untidy nests built in bushes not far off the ground or in low trees.

The Bar-breasted Weaver-Finch (*Ortygospiza polyzona*) is brown above, grey-brown on the sides of the body, and grey on the upper breast ; both the latter regions are barred with black and white. The lower chest is chestnut and the abdominal regions are buffish. The throat is black and there is a white ring round the eye. Length, $3\frac{1}{2}$ inches. This little bird is a well-known species in the Central Transvaal, where it may always be found in flocks feeding on the grass and weed seeds in old lands or along grassy roadsides and the like.

When disturbed it flies up with a curious metallic cry which gave it its local name of "Tink-tinkie."

It builds a dome-shaped nest under a tussock of grass, and lays four or five pure white little eggs.

The Social Weaver (*Philetaerus socius*) is a brown bird with the feathers of the nape and upper back black on the

terminal portion, the edges being buff, giving these regions a scaly appearance; forepart of face, chin and upper part of throat, black. Length, $5\frac{1}{2}$ inches. This bird is chiefly remarkable for the hayrick-like nest it builds. This consists of a structure of grass resembling the thatched roof of a Kaffir hut, and is placed in a camel-thorn or mimosa tree. The lower surface is honeycombed with cavities, lined with feathers, which constitute the nesting places. Dozens of pairs of birds nest under one roof. It lays three or four eggs of a brownish-drab spotted with brown and pale purplish.

The Red-headed Weaver-Finch (*Amadina erythrocephala*) is of an ashy-grey colour above (the males possess a red head) and below of a scaly appearance, these regions being banded with bars of black and white. Length, 5 to $5\frac{1}{2}$ inches. It is a sociable bird, resembling the Cape Sparrow (Mossie) in its general habits. It builds a large, rambling structure not unlike that of a Sparrow, and lays three white eggs during the months of March to June. It is "local" in distribution, and was very common on Modderfontein, Transvaal, until 1900, even breeding there, but since the war it has become exceedingly scarce, only appearing occasionally as "partial migrants."

There is a smaller species in the north (*A. fasciata*) characterised by a crimson band across the throat (no red head) in the males. This bird has been fairly common in the Pretoria District during recent years. It is generally called the "cut-throat."

BISHOP AND WIDOW-BIRDS

The genus *Pyromelana* contains a few well-known and conspicuous birds, the first of which is the Red Bishop-Bird or Kaffir-fink (*P. oryx*), too well known in its

brilliant plumage of orange-scarlet and black to need any description. Length, 6 inches. It is a common resident from Cape Province northwards. It is particularly common in the Maroka district of the Orange Free State and the Central Transvaal, where the writer has had personal experience of its depredatory habits. In the first-mentioned country it is so destructive to the Kaffir corn and



FIG. 65.—The home of the Red Bishop-Bird. (Photo. Haagner.)

wheat crops that it has earned the undying enmity of the Barolong natives, who trap and kill it wherever and whenever they can. It nests in the reed-beds which border the spruits (rivulets), many hundreds of nests being congregated together in a space of as many square feet. It is not an uncommon sight to see two or three nests suspended between a single pair of reeds. The nest is shaped like a

pouch with a domed opening at the side near the top, and is usually constructed of strips torn from the leaves of the reeds. It lays three or four eggs of a beautiful deep greenish-blue colour and rather pyriform in shape. To see several hundred of these birds flitting about the reeds on a bright sunlit day is a glorious sight, the habit they have of fluffing out the feathers giving a brilliance and intensity of colour to the vivid red and glossy black, of which the prepared skin exhibits but little trace.

Its smaller congener, the Golden Bishop (*P. taha*), is not nearly so common. In its beautiful golden-yellow and glossy black plumage it looks like a ball of gold as it flits over the marshy, weed-covered patches in which it delights to make its home, fluffing up its feathers and emitting its grating, chirp-like call. It builds a similar nest to that of the Red Bishop, constructing it, however, chiefly of fine grass, and placing it amongst the rank weeds. It lays four to six eggs of a white ground colour spotted with tiny dots of very dark brown. This species is not found in the Cape Province. It is somewhat "local" in distribution, appearing in certain localities in fair numbers one season and being almost unknown there the next. It is fairly common in the Pretoria District.

The Cape or Yellow Bishop-Bird (*P. capensis*) and its two sub-species are larger birds than the Golden Bishop, and differ in having the top of the head black instead of this region being yellow, as is the case with the Golden Bishop. The sub-species (*P. c. approximans*) inhabiting the eastern Cape Province, northwards, is smaller than the western form, while the northern form is intermediate in size between the two, and has, moreover, black thighs (*P. c. xanthomelana*).

The males of this genus change their summer plumage by abrasion into a dull brown colour during the winter

months, more in keeping with the leafless reeds and dried-up veld. The females are always of this dull colour.



FIG. 66.—Cape Bishop-Bird near nest.

The genus *Coliopasser* also presents us with some well-known forms, chief amongst these being the Long-tailed Widow-Bird (*Coliopasser procne*), known in Natal as the



FIG 67 — Nest of Red-collared Widow-Bird.

Sakabula. In its breeding garb of glossy black, orange-red epaulettes, and long heavy tail gracefully curved, the male is a conspicuous ornament of the veld almost anywhere in South Africa, excepting western Cape Province. Length, 23 inches (male), 7 inches (female). It builds a dome-shaped nest of grass in a tuft of the same, and lays three eggs of a bluish-white, thickly marked with dark and purplish-brown and greyish blotches and spots.

The Red-collared Widow-Bird (*C. ardens*) is smaller than the preceding species, has no red epaulettes, but is characterised by an orange-scarlet collar across the upper breast. Length, 12½ inches.

Like the *Pyromelana*, both these species are polygamous in habits, one male consorting with from six to a dozen females. The latter are plain brownish birds.

The sprightly little Pin-tailed Whydah (*Vidua serena*) is also a well-known figure in its pied plumage of black and white, long narrow tail, and pink bill. It is known to the boys as the Koning Rooibekje (King Red-bill). The breeding habits of this bird have long been a mystery to ornithologists, owing to the fact that it is a fairly common bird in South Africa, and yet only one or two unsatisfactory observations have been recorded. Mr. Austin Roberts, the ornithologist and collector, thinks, however (*Journal of the South African Ornithologists' Union*, June, 1907), that he has solved the problem. He considers the species parasitic, and that they deposit their eggs in the nests of other birds, chiefly species of the *Estrildinæ*. This has since been confirmed by other observers.

The Shaft-tailed Widow-Bird (*Vidua regia*) is black above, and yellowish below; the four centre tail-feathers being lengthened and only webbed for the final 2 or 3 inches, the

rest of the shaft being bare. Length, $4\frac{1}{4}$ inches ; to end of long tail-feathers, 12 inches.

The Paradise Widow-Bird (*Vidua paradisea*) is also black above, with a collar round the neck and the breast bright chestnut-red. Total length, $14\frac{3}{4}$ inches. Females of both these birds are brownish birds streaked with blackish.

SUNBIRDS

The next group of Architects is the Sunbirds (family *Nectarinidae*), sometimes called Sugar-birds, and Zuikerbekjes (Sugar-mouths) by the Boers. They live on nectar, pollen and insect life.

Perhaps the best known species is the bright metallic-green Malachite Sunbird (*Nectarinia famosa*), with its yellow shoulder (pectoral) tufts, and long tail-feathers. Length of male, $9\frac{1}{2}$ inches ; female, 6 inches. This bird changes to a dull brown colour during the winter months, which is the garb of the female bird at all seasons. It is a common species throughout South Africa, excepting Lower Natal and Rhodesia, where it is scarce and local. In spring the males may sometimes be heard indulging in a short, soft song of full melodious notes.

It builds a large pear-shaped nest of grass and fibres bound with cobwebs and vegetable down, and lined with hair and feathers, &c. The two eggs are of a pale brown colour, closely marked with dots and blotches of dark brown and greyish.

The Bifasciated Sunbird (*C. mariquensis*) has the head, neck, throat and back metallic-green ; below the throat there is a narrow cross-band of steel-blue, succeeded by a much broader one of dark red ; rest of under surface black. Length, $4\frac{3}{4}$ inches. This bird is not found in Cape Province. We observed it in pairs on the Crocodile River, north of the



FIG. 68.—Malachite Sunbird at nest.

Magaliesberg in the Pretoria district. It is common in the National Zoological Gardens in March.

In this locality we found the White-breasted Sunbird (*C. leucogaster*) by far the commoner species. Indeed, the



FIG. 69.—Double-collared Sunbird : female at nest.

latter bird was seen in parties of three to six individuals during the last week in December, 1906, exploring the native trees, then laden with fruit, for insects, and diligently sucking the blossoms of a parasitic plant then in bloom.

In the Albany district of Cape Province the commonest

species is the Greater Double-collared Sunbird (*C. afer*), easily distinguished by its larger size and by almost the whole breast being bright scarlet, which is divided from the green throat by a narrow band of steel-blue. Length, $5\frac{1}{2}$ inches.

It is a bird which may be found either in the bush-clothed kloofs, the gardens and orchards, or more open bushy stretches.

The nest is a somewhat circular structure with a domed side entrance, and is either fixed to the end of a fairly short mimosa twig, or suspended from a thin twig in a kloof.

On January 5 we took a very neat nest built in the centre of a pendent bunch of *ptylandsia*, which is now in the Transvaal Museum.

There is another common species, closely resembling the foregoing in coloration, but is smaller (length, 5 inches), the Lesser Double-collared Sunbird (*C. chalybeus*), which is not so common as the larger bird in Albany, but at Port Alfred the position is reversed, the smaller species being by far the predominant one.

Both these "Collared" species lay grey eggs thickly mottled with slate colour and brown, those of the latter bird being naturally smaller.

The Scarlet-chested Sunbird (*C. gutturalis*), in its plumage of velvety-black, and scarlet chest and lower throat, is perhaps one of the loveliest Sunbirds in South Africa. It is common in Zululand and Natal, and at Warmbaths, Transvaal.

The Black Sunbird (*C. amethystinus*) is of a velvety-black with the crown of the head metallic-green, and the throat and cheeks, shoulders, and upper tail-coverts metallic-purplish-violet with a coppery sheen.

Like the scarlet-chested Sunbird, this species is particularly fond of the bright red blossoms of the Kaffirboom



FIG. 70.—Nest of Black Sunbird. (Photo. A. D. Millar.)

(*Erythrina caffra*). Its nest does not differ to any marked extent from the other species, and the eggs are cream-coloured, streaked and blotched with purple-brown and slate-grey.

It is not uncommon around Grahamstown, Cape Province, and in Johannesburg, Transvaal.

The Mouse-coloured Sunbird (*C. verreauxi*) is, as its name implies, of an ashy-brown colour above and below with pectoral tufts of bright red. Its range is rather limited, being so far only recorded from Eastern Cape Province, Natal and Zululand.

In Albany it was formerly fairly common, but of late years has become somewhat scarce. We were lucky enough to take two nests on January 5, 1907, in a thickly wooded kloof off Featherstone Valley, near Grahamstown. These were both untidy-looking pendent structures of grass, decorated all over with dead leaves stuck on with cobwebs and lined with vegetable down and feathers. The nest is almost invariably hung from a branch close to a krantz (cliff). The eggs are so thickly mottled and blotched with chocolate and purplish-brown as to appear at first sight of a general rich brown colour; they are the prettiest of all the Sunbird eggs.

The Orange-breasted Sunbird (*Anthobaphes violacea*) is metallic-purple on the chest and has the rest of the under parts of an orange-yellow, the breast being tinged with red. It is confined to Cape Province, ranging as far east as Albany. It breeds in winter, building an oval, dome-shaped nest in a tuft of heath, and lays two eggs of a white ground, marked with grey-brown.

The last representative of the family is the tiny Collared Sunbird (*Anthothreptes collaris*), which is green above and yellow below, the yellow being separated from the green throat by a band of violet.



FIG. 71.—Male, female, and nest of Black Sunbird.

We found them fairly common in the Albany kloofs during January, 1907, and discovered several nests, which were like smaller editions of the Mouse-coloured Sunbird's nest, but they were invariably hung from a low branch near to a water-rill. The eggs number two, and are of a whitish colour thickly marked with greyish-brown.

The females of all the Sunbirds are much plainer and duller coloured than their mates.

PENDULINE TITS

We next come to a family of birds, the Tits (*Paridæ*), which contains in the genus *Ægithalus* two species of tiny birds which may lay claim to being two of the neatest little architects of the avian world.

They will probably be more easily distinguished from one another from the following extract of a diagnosis of Dr. Sharpe's in the *Ibis* for 1904 :—

- | | |
|---|--------------------|
| A. Breast darker and dull ochreous; upper surface dark ashy, dark olivaceous on the rump and upper tail-coverts | <i>Æ. minutus.</i> |
| B. Breast light sulphur-yellow, slightly darker in old birds, light grey on head verging into light olive-greenish, becoming more sulphur-yellow on the rump and upper tail-coverts | <i>Æ. smithi.</i> |

The first is confined to the Cape Province south of the Orange River, the second being the form inhabiting the Transvaal, Mashonaland and Damaraland.

These dainty little birds, called Kappoc-vogel (meaning cotton-wool bird) by the farmers, build a neatly woven nest of the downy seed of plants (in sheep districts wool is utilised) felted together into distinct layers, until a strong, cloth-like structure of a domed shape with an opening at the side is completed. This is quite rainproof and exceedingly warm and cosy. Below the actual opening there is generally a blind opening in the shape of a shallow pouch, which the natives assert is used by the male as a roosting-place. When

the birds leave the nest they pinch the walls of the opening together, and at a time when such is the case, the blind opening would naturally act as a decoy to any marauding snake or field-rat, which might be as good an explanation as the one offered by the blacks.

The Penduline Tits lay from six to twelve tiny white eggs.



FIG. 72.—Nest of Cape Penduline Tit. (Photo. Dr. Kirkman.)

SWALLOWS

It will now be necessary to make a big jump so far as classification is concerned and turn to the Family *Hirundinidae* (Swallows), whose nests of mud pellets are a familiar enough sight to all.

The Rock-Martin (*Ptyonoprogne fuligula*) is a brown bird with the tail-feathers, excepting the centre and two outer ones, adorned by a circular white spot on the inner web. Length, $5\frac{3}{4}$ inches.



FIG. 73.—Nest (top one) of White-throated Swallow.

It is not found north of the Transvaal, nor in South-west Africa. but is otherwise fairly evenly distributed. It builds an open half-cup-like nest against a rock or under the eaves of a house, of mud pellets, and lays three or

four eggs of light cream spotted with various shades of brown.

The European Swallow (*H. rustica*) does not breed in South Africa, being a migrant from Europe, arriving here between September to November, and departing again during March or April. It is blue above and whitish below. The throat and forehead are of a rufous colour.



FIG. 74.—Pearl-breasted Swallow on nest.

The White-throated Swallow (*H. albigularis*) is dark blue above, except the forehead, which is reddish, below white except a broad band of blue across the chest. It is at once distinguishable from the European Swallow (which it rather closely resembles) by its white throat. Length, $6\frac{1}{2}$ inches. It is also a migrant, arriving about the same time as the European Swallow—usually earlier—but breeds in South

Africa, making a cup-shaped nest of mud on a beam of an outhouse, or under an overhanging bank or rock, and lays three or four eggs of a white ground spotted with pinkish-brown and yellowish.

The Pearl-breasted Swallow (*H. dimidiata*) is smaller than the preceding species, and has no red on the forehead. It builds a cup-shaped nest against a rock or wall.

The Larger Stripe-breasted Swallow (*H. cucullata*) and its smaller congener (*H. puella*) are blue above and have the head and rump of a brick-red colour: whitish below streaked with brown shaft-stripes. The latter bird differs from the former in being smaller, the shaft-streaks being broader and the lower back and rump being darker red. Length, $7\frac{3}{4}$ inches.

Both construct mud nests of a globular shape with a long entrance tunnel, the larger species preferring a beam in an outhouse, or a skirting-board on a verandah, whereas the smaller bird usually places its smaller nest under an overhanging rock. They lay pure white eggs.

The Red-breasted Swallow (*H. semirufa*) is easily recognisable by its entire under surface being of a rich chestnut colour.

It constructs a nest much like that of the Stripe-breasted Swallow, and lays white eggs. We have taken the eggs from culverts or from antbear holes.

The Cliff-Swallow (*Petrochelidon spilodera*) is the last representative of the family. It somewhat resembles the Lesser Stripe-breasted Swallow in coloration, but has a white chin, and pale reddish throat followed by a blackish band with white spots; rest of under surface white, except the vent regions, which are reddish.

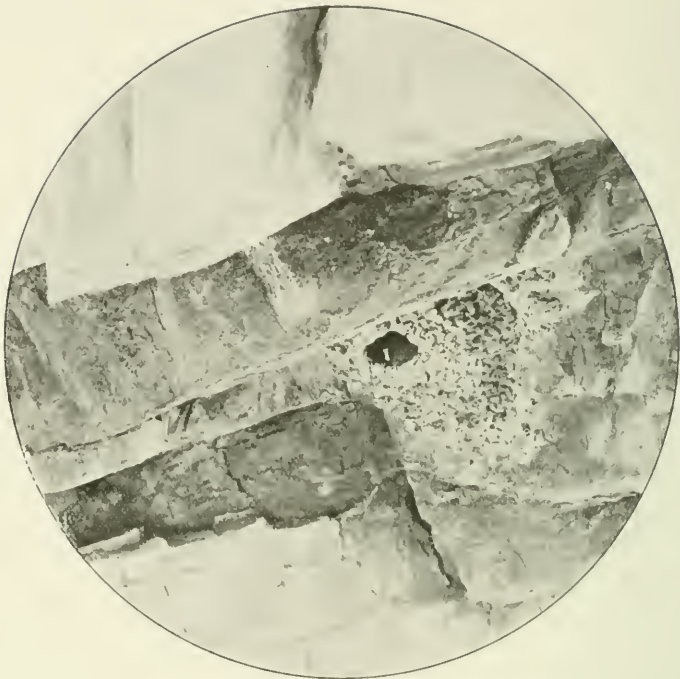


FIG. 75.—Nest of Lesser Stripe-breasted Swallow. (Bird just emerging.)



FIG. 76.—Nest and eggs of *Cisticola ruficapilla*.

This is a common bird in the Orange Free State, where it usually builds in colonies against the walls of houses. At Brandfort Station a large number of nests were usually to be found clustered against the goods shed, but lately the officials have taken exception to their presence and destroy the nests as fast as they are built.

The nest is constructed of mud, and globular in shape, with an entrance hole near the top, and has no tunnel.



FIG. 77.—Breeding Colony of Cliff Swallows. (Photo. R. Chambers.)

Eggs three in number, and white in coloration, speckled and blotched with red-brown and purplish-black.

All the Swallows are insect feeders, subsisting chiefly on flies, mosquitoes and the like.

WARBLERS

Amongst the members of the Family *Sylviidæ* there are many unassuming, sombrely plumaged little birds possessed of more than ordinary architectural skill.

First of all comes the Green-backed Bush-Warbler (*Camaroptera oliracea*), or Tailor-Bird, as it is appropriately called in Grahamstown. It is olive-green on the upper parts, except the crown of the head, which is grey, the latter being also the colour of the under parts, excepting the centre of the abdomen and under tail-coverts, which are white.

It inhabits the thick bush and forest regions, ranging from George in the Cape Province eastwards and northwards.

It constructs a neat purse or semi-dome-shaped nest of fibres and fern stems lined externally with moss and internally with vegetable down. It is situated in a low thick bush, and has the leaves in the immediate vicinity of the nest stitched to it with fine fibre-like flax from seed-pods, &c., and cobwebs. It lays three pure white eggs.

This Warbler is sometimes called the Bush-goat on account of the plaintive goat-like call which the bird gives utterance to.

The Crombee (*Sylviella rufescens*), known to the farmers as the Stomp-stertje (Stump-tail), is ash-grey above and tawny-buff below. Its range is extensive, the bird being found throughout the Cape, to the Transvaal, Zululand, Mashonaland and South-West Africa. It frequents the mimosa scrub, building a pretty pendent nest of dry stalks and leaves, woven together with cobwebs, and lays two or three white eggs with a ring of brown and purple spots round the blunt end.

The Black-chested Wren-Warbler (*Prinia flavicans*) is brown above, eyebrow, throat and cheeks white, under surface light yellow, with a dark brown band across the breast.

It builds a light, artistic, oval-shaped nest of fine grass, beautifully woven, with a domed side entrance near the top,

lining it with white vegetable down. The eggs—usually three in number—are pale bluish-green in colour, marked with reddish-brown, but they vary considerably in colour, like those of many of the Warblers.

The *Cisticolæ* (Grass Warblers) are a large group not easily distinguished from one another by the tyro; they build circular or oblong-shaped nests woven of grass, warmly lined with down or wool, much after the style of the Widow-Birds.

For more information on this extremely difficult group we must refer the reader to the text-books.

HAMMERHEAD

We now come to the last species we will deal with in this chapter, viz. the Hammerhead (*Scopus umbretta*), usually called the Hammerkop or Paddavanger (Frog-catcher) by the South African.

In its characteristic brown garb, crested head and long legs, it is a familiar figure along the shores of water-courses, vleis and dams, where it may be found singly or in pairs cutting its queer capers, or on the prow for frogs and small fish.

It constructs a huge nest of sticks and mud; first a saucer-shaped foundation about 3 feet in diameter is built of large sticks thrown together and cemented with mud, either on a rock by the side of a stream, or more frequently in the fork of a tree. Upon this foundation a circular dome-shaped structure is erected, containing a round chamber (sometimes two). It is a solid compact structure, with a round entrance hole just large enough to admit the bird, usually situated on the most inaccessible side. The top is often decorated with old tins, rags, bits of plank, and we have even found dead birds, old bits of skin, &c. Whether



FIG. 78 — Hammerhead and nest on a rock.

this is to hide the real identity of the nest from above is difficult to say. There is a large nest in a fork of a willow-tree about 25 feet from the ground at the Dynamite Factory, Modderfontein, which has been made use of year by year for the last seven or eight years. This measures about



FIG. 79.—A pair of young Hammerheads.

4 feet by $3\frac{1}{2}$ feet, and is sufficiently strong to easily bear the weight of a fairly heavy man. The Hammerhead lays three or four eggs of a dull white, sometimes marked with a few pale brown blotches, which, however, may be stains. Eggs may be looked for during the months of October and November.



FIG. 80.—Nest of Hammerhead in a tree. (Photo. E. H. U. Draper.)

CHAPTER V

DENIZENS OF THE FOREST

THIS is a large group presenting divers forms, and includes some of the loveliest as well as some of the strangest of South African birds.

In this chapter are included all the dwellers of forest and bush, excepting those that find a place under more special headings, such as "Friends of the Agriculturist," "Bird Architects," &c.

CANARIES AND SEEDEATERS

To the group belong most of the Family *Fringillidæ* amongst which the majority of the native songsters are found; as these birds are perhaps of more general interest than any other in the group, we will treat of them first.

It is quite a common belief amongst Europeans fresh from the old countries that South Africa possesses no song birds worthy the name. This is wholly incorrect, for although there is no Skylark or Nightingale, South Africa possesses quite an array of good songsters.

The first, and probably favourite songster of the Family is the Cape Canary (*Serinus canicollis*), the male of which is of a greenish-yellow colour on its upper surface, with the rump regions of a brighter yellow and the under surface of a golden yellow. The female is browner on the back and paler below. Length, $5\frac{1}{4}$ inches. It is a common resident in most districts of the Cape and Natal, but in the Orange Free State and Transvaal it is uncommon and "local." This bird has a fine sustained song of sweet full notes, the quality of which varies, however, in individual members.

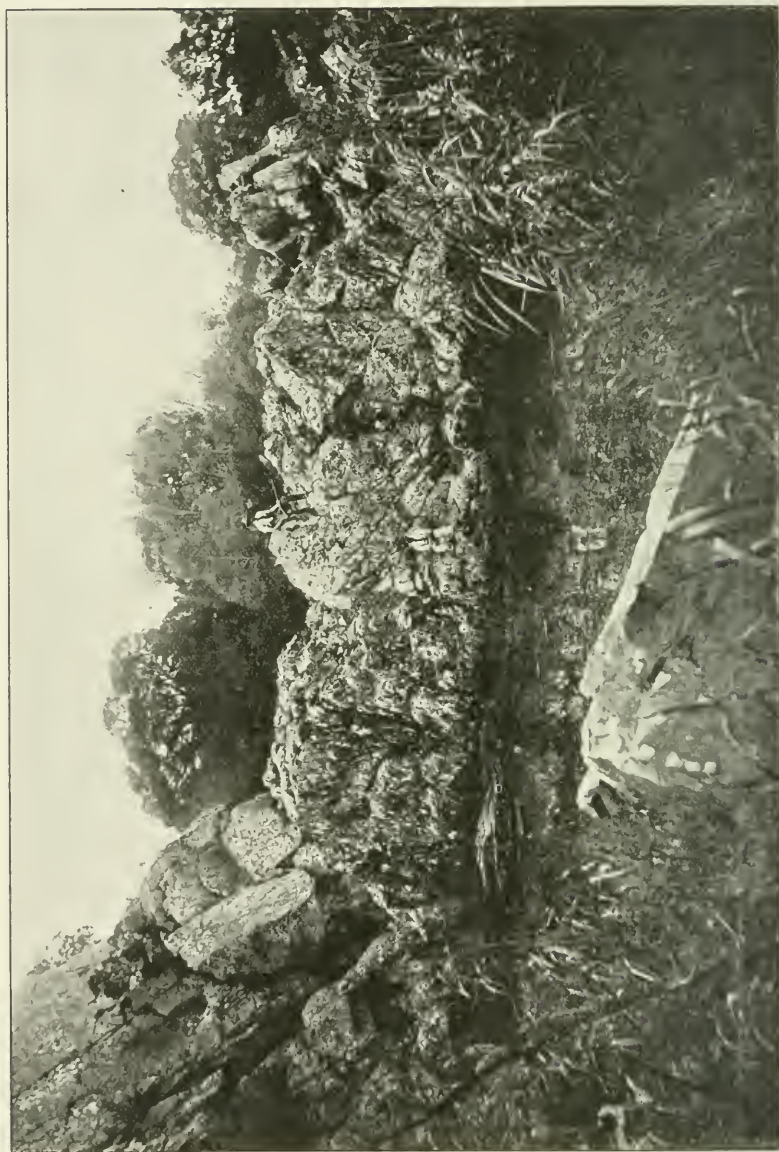


FIG. 81.—Collecting: The Pool, Blaauwkrantz, near Grahamstown, C.C. (Photo. Dr. Robertson.)

It lives principally on weed seeds and insects, thus being useful as well as ornamental and a songster. It builds a neat little cup-shaped nest and lays three or four eggs of a very pale blue, streaked and spotted at the obtuse end with purple and reddish-brown.

It takes readily to confinement, being hardy and can be bred in captivity; it is in consequence much sought after



FIG. 82.—Cape Canary at nest.

by the schoolboys of the Eastern Districts of the Cape, who made a regular traffic in the catching and selling of Canaries before the Wild Birds' Protection Act of 1899 was in operation. [Unfortunately no clause was inserted allowing the collection of birds for scientific purposes.] This Act was largely due to the praiseworthy efforts of the late genial and sporting magistrate of Grahamstown, Mr. Francis Graham.

The Large Yellow Seedeater (*Serinus sulphuratus*), the "Geel-seisje" and "Bully" of the Colonial boys, and its smaller congeners, the Kleine Seisjes (*S. flaviventris* and *S. marshalli*) make handsome cage-birds in their greenish-

yellow and bright golden yellow colours. The Northern form (*S. marshalli*) is extremely common around Bloemfontein and Brandfort in the Orange Free State, and it is a pretty sight to see a small flock of these birds consisting of some half-dozen males with a like number of their sombre-coloured spouses flitting about amongst the mimosas in the bright sunlight. Although not such a renowned songster as the Cape Canary, it has a lively though simple song, and in its richly tinted garb makes truly a charming cage-bird.

Another pretty little species is the Icterine Seedeater (*S. icterus*), which is the common form in the Central Transvaal, being fairly plentiful from the Modderfontein Dynamite Factory through Irene and Pretoria to the "Bushveld." It is lively, tame and of confiding habits, and has a charming melodious song with full flute-like notes, hence it is often caught and even exported over-sea as a cage-bird.

It is prettily marked in yellow, green and black. Its conspicuous yellow eyebrow and yellow band on the forehead is sufficient to distinguish it from the other species of the genus. Hence the name by which it is commonly known in the Pretoria District (viz. "Yellow-eye"). Length, $4\frac{1}{2}$ inches.

A vastly different bird is the sombre-plumaged White-throated Seedeater (*S. albigularis*) called "Dik-bek Seisje" or "Berg-seisje" by the Colonial boys. It is of an ashy-brown colour streaked on the back with darker brown. Fore checks, throat and abdomen white. Length, $6\frac{1}{2}$ inches. It has a loud musical song which is by some critics even preferred to that of the Cape Canary.

Another good little songster is the Yellow-rumped Seedeater (or "Black-throated," as it is usually called—*S. angolensis*), which is pale buffish-brown with a blackish throat and yellow rump. Length a little over $4\frac{1}{2}$ inches. It is exceedingly common in the Brandfort and Kroonstad

Districts, Orange Free State, and Pretoria District, Transvaal, in which latter locality it is known as the "Bergie." It is usually found in small flocks, or in pairs.

A favourite little songbird is the dainty little Mountain Canary (*Alario alario*) familiarly called the "Black-head" by the schoolboys of the Eastern Cape Province. It thrives



FIG. 83.—Mountain Canary.

readily in captivity, is of gentle habits, and inter-breeds with the Cape and Common Canaries. It is essentially a Cape Province bird, but ranges into Great Namaqualand, and the Orange Free State as far north as Bloemfontein. The males are of a chestnut-red above with part of the wing and entire head black; the sides of the neck and under surface white excepting the throat and centre of breast which is black, forming a "tie." Length about $4\frac{1}{2}$ to $4\frac{3}{4}$ inches.

It has a very sweet and softly modulated song. It builds a neat cup-shaped nest in a low bush and lays from three to five eggs of a pale blue-green colour, spotted at the large end with red-brown.



FIG. 84.—Streaky-headed Seedeater at nest.

A songster of no mean merit is the Streaky-headed Seedeater (*Poliospiza gularis*), a dull greyish-brown coloured bird with a darker brown head striped with white on the crown. Length, 6 inches. It is very common at Modderfontein, and Irene, Transvaal, where it may be seen drinking in some

numbers at eventide. It is largely a seedeater, but may sometimes eat soft fruit, such as figs. We have also seen it picking out the seeds from the ripening heads of the sunflower.

Amongst the Ploceidæ, Alaudidæ and Nectarinidæ, there are songsters of various qualifications, but we will deal with them under other headings.

SPARROWS

The Sparrows are not a large group in South Africa; although useful at times, they are often very destructive. First in order of classification comes the Diamond Sparrow (*Petronia supersiliaris*) bearing the most inappropriate name of "Rock" Sparrow in the text-books. Mr. Ivy informs me it is fairly common in the Albany District, assembling in small flocks amongst the high trees around Grahamstown during the winter months. In summer it resorts to the high Bushveld, where it constantly affects the branches of decaying trees. In the Pretoria Bushveld it is also common at times. As already stated, the name is a misnomer, as it is a true arboreal bird, seldom alighting on the ground except when tempted by grain, which it readily eats, although principally insectivorous. We have so far only noticed it nesting in hollow trees or posts, and have not found or heard of an authentic case of a nest being found in a hole in a krantz or in a wall.

It devours a fairly large quantity of insects and weed seeds, thus doing a certain amount of good to agriculture.

The Diamond Sparrow is a drabish-brown bird with a broad greyish eyebrow, and a yellow spot on the chest which is bright and distinct in some individuals, more obscure and paler in others. Length, $6\frac{1}{2}$ inches. It lays three or four grey eggs mottled with slatey-brown.

The Cape Sparrow (*Passer melanurus*), or Mossie, is the

South African equivalent of the English House Sparrow. Its habits are much the same, building as it does a large untidy nest of grass and sticks lined with wool, feathers,



FIG. 85.—Diamond Sparrow near nest hole.

twine, or indeed anything soft and warm that comes handy. The nest is placed in a bush, tree, gutter or pipe, under the eaves or on a rafter. It lays three or four eggs of a pale greyish-green or blue colour spotted and blotched with various shades of brown; the eggs vary considerably in

size, shape and markings, some being almost black with the profusion and darkness of the blotches, while others are quite light owing to the scarcity and paleness of the mottling.

They eat almost anything and during the grain season do quite an appreciable amount of damage in company with their cousins, the Weaver-birds.

The Cape Sparrow's range is fairly general in South Africa, but only extends into the Coast Districts of the Eastern portion of the Cape during the winter months; its most southerly nesting grounds seem to be the high veld at the Great Fish River in the Albany Division.

The male differs from the female in his brighter tints and black head, the female having a grey head with pale eyebrow. Length, 6 inches.

There is a larger (length, $6\frac{1}{4}$ inches) and more robustly built species than either of the two preceding, viz. the Greater South African Sparrow (*Passer motitensis*). This bird is pale red-brown above streaked with black. Top of head grey. Cheeks, sides of neck and under parts white, excepting the throat and upper chest, which is black. Length, $6\frac{1}{4}$ inches. The female has the top of the head brown and only the throat blackish. It is not known south of the Orange River. In the Central and Northern Transvaal it is fairly common at times, but is a scarce bird when compared with its audacious brother above mentioned.

Another scarcer species is the Grey-headed Sparrow (*P. griseus*) ranging from the northern and north-eastern districts of the Cape, throughout the sub-continent. Both sexes resemble the *female* of the Mossie in colour, but can be distinguished from this bird by its shriller call-note and dark grey head *without* a light-coloured eyebrow. Its nidification was first described by Major Sparrow in the *Journal of the South African Ornithologists' Union*, for July, 1905, and

subsequently by Austin Roberts, *Journal of the South African Ornithologists' Union*, June, 1906. The eggs are covered with blackish-brown blotches and streaks.

BUNTINGS

The subfamily *Emberizinae* is also a small group of birds, but contains the handsome Golden-breasted Bunting (*Embe-*

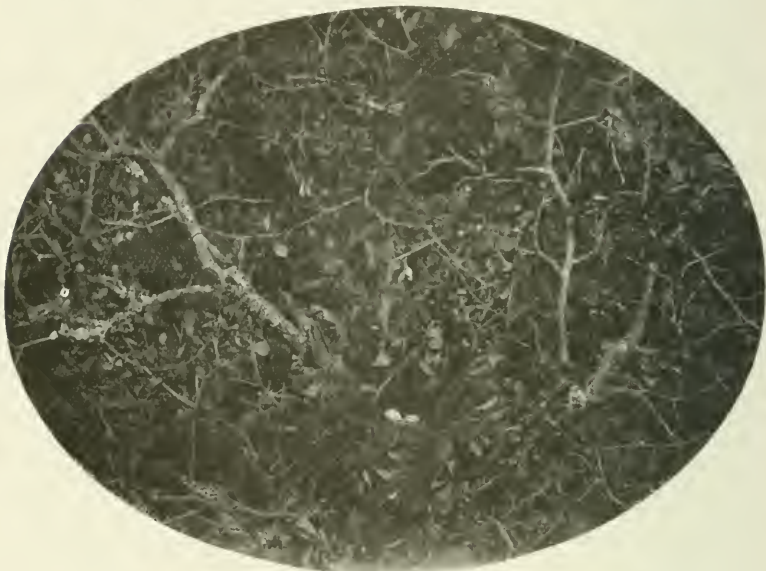


FIG. 86.—Golden-breasted Bunting at nest.

riza flaviventris), which is fairly plentiful in the eastern districts of the Cape and in the Pretoria Bushveld.

So far as our experience goes the nest is never placed on the ground, but usually six to ten feet high in the fork of a small tree—never in thick bush or kloofs. The eggs, four in number, are white, with most beautiful scroll-like, wavy lines, forming a wreath round the obtuse ends. The nest is cup-shaped, composed of twigs and grass, and usually neatly lined with long stiff hair or fibres. Its song is rather plaintive

and is somewhat similar to that of the European Yellow Hammer. It feeds principally on weed seeds.

The other members of the subfamily are not bush-birds, so we must treat of them under another heading.

STARLINGS

We next come to the Sturnidæ (Starlings), a fairly large group amongst which are several birds quite as destructive as they are useful, and here is also included the celebrated Wattled Starling (one of the Locust Birds), which will be found described amongst the agriculturist's friends.

A common member of this family is the Red-shouldered Glossy Starling (*Lamprocolius phænicopterus*), commonly known as the Green Spreeuw in the Eastern portion of Cape Province. It is of a brilliant metallic glossy green, blue and purple. Length $10\frac{1}{2}$ inches. It inhabits the bushy kloofs, usually laying four or five bluish-green eggs, spotted with pale red-brown, in a hole in a tree. We found that the soft Euphorbias are very often utilised by these birds as nesting sites.

The true Green Spreeuw is confined to Cape Province, it being replaced in the Transvaal and Natal by a smaller subspecies (*L. p. bispecularis*), which, in addition to being smaller (length $8\frac{1}{2}$ inches), has the back of a steel-green colour instead of the oil-green tint which obtains in the large bird. They resemble one another in habits, being chiefly frugivorous, but vary this with an occasional diet of insect life.

The next species is the Green-headed Glossy Starling (*L. sycobius*), which ranges from the Central Transvaal northwards.

This bird is a little smaller than the lesser Green Spreeuw (length 8 inches), and has the head glossy oil-green, with a coppery sheen in the sunlight. Its nesting habits are similar to the preceding species, as are also its eggs.

The Black-bellied Glossy Starling (*L. melanogaster*) is the last representative of the genus we will deal with, and is immediately distinguishable by its dull black belly.

It ranges from Knysna, through Eastern Cape Province (where it is, however, not common), northwards to British East Africa. In the Albany Division we found them nesting; the few eggs taken were invariably of a plain pale greenish-blue, whereas Dr. Stark describes them as being spotted with reddish-brown. It is, however, possible that they vary occasionally, like those of the ordinary *Spreo bicolor*.

A larger, longer-tailed bird than any of the preceding is the Purple Glossy Starling (*Lamprolornis australis*), which is common in the Transvaal Bushveld. It is known as the groote Blink-spreeuw, and has a black iris.

A superbly beautiful bird is the Plum-coloured Starling (*Cinnyricinclus leucogaster verreauxi*), the male of which has the upper parts, head and upper chest a bright metallic copper colour with purplish and violet reflections, the rest of the under surface being white. The female is totally different, being of a mottled brown. This is also the plumage of the young bird.

This bird ranges from Natal, the Orange Free State and Damaraland, through Zululand and the Transvaal to the Congo on the West, and Tanganyika on the East. They feed chiefly on berries and insects. In the Pretoria District along the Crocodile River, north of the Magaliesberg Range, we found them not uncommon, and also along the Pienaars River Valley.

They nest during December in holes in trees, laying four pale blue eggs spotted with pale brown.

ORIOLES

The Family *Oriolidae* is represented in South Africa by four species, one of which (*Oriolus notatus*), though coming as far south as the Northern Transvaal, is scarce and little



FIG. 87.—Female and nest of Black-headed Oriole

known, while the other (*O. auratus*) has only recently been added to the South African Fauna by Alexander, who met with it in the Zambesi Valley.

Of the remaining two species, the Golden Oriole of Europe (*O. galbula*) is a fairly scarce visitor to South Africa, being recorded, amongst other places, from Pondoland, by Sergeant Davies, C.M.R.; Damaraland by Andersson; Rustenburg (Barratt); Irene (L. E. Taylor) and Hartebeest Poort (Haagner), both the last being in the Pretoria District. It is of a golden yellow colour, with a black streak from the bill to the eye. Length, 10 inches.

The last member of the family is the Black-headed Oriole (*O. larvatus*), easily distinguished from the Golden Oriole by its black head and throat. Length, $9\frac{1}{4}$ inches. This bird is fairly common in the Albany and Bathurst Divisions of the Cape Province, where it is often known as the Yellow Spreeuw. During the winter months it affects the neighbourhood of gardens and populated areas, betaking itself in September to the outskirts of the Bush and commencing to build in October.

It constructs a cup-shaped nest of *Ptylandsia* (Old Man's Beard Moss), and generally deposits three eggs of a creamy white ground sparsely marked with purplish-brown.

Mr. Ivy mentions that, although usually very wild, one of these birds once allowed a camera to be fixed to a bough within a few feet from the nest on which it sat. It has full flute-like notes which are very pleasant to the ear.

In the Central Transvaal it is scarce, appearing only as "partial migrants"; this is, however, accounted for by its forest-loving disposition, natural forest being an unknown quantity in the Witwatersrand area. I procured a single example at Modderfontein, Transvaal.

It feeds on berries, wild fruits, and insects and their larvæ.

WHITE-EYES

Turning to another Family of the Passeres—widely separated as far as classification goes—we come to the



FIG. 88.—Cape White-eye at nest.

family *Zosteropidae*, of which South Africa possesses several species. We need only treat of the two commoner : *Zosterops virens* (Green White-eye) and *Z. capensis* (Cape White-eye).

They frequent bushy country, living on the juices of flowers, insects and fruit. The first-named bird is grass green above, whereas the latter is olive-green. In addition the Green White-eye is yellow underneath, while the "Cape" bird is light brown, only the throat and under tail coverts being yellow. They are immediately recognisable by the white ring round the eye, which has given them their trivial English name "White-eye" and the Dutch "Kersoogie."

In the Central Transvaal we found them especially fond of the nectar of the ordinary eucalyptus flowers, and very destructive to ripe apricots and figs.

They build a small cup-shaped nest of fine material and moss cemented together with cobweb, &c., and finely lined with hair; they lay four or five pale blue eggs.

TITS

The Tits (*Paridae*) are represented by six kinds, one of which is, however, only a sub-species.

The Black-breasted Tit (*Parus afer*) ranges through the South-western and Central portions of Cape Province, and has the crown, throat, cheeks and centre of breast black, the back brownish, and the under parts pale fawn; it is replaced north of the Orange River by the Grey Tit (*P. cinerascens*), which differs from the preceding species in being grey both above and below.

The Black Tit (*P. niger*) is black all over except certain wing feathers, &c., which are tipped with white. It is found from the Eastern Cape Province northwards to Mashonaland, and thence westward to Ngami, Damaraland and Benguela.

The Black Tit is a noisy little fellow, whose call is a deep churr-churr-churr. Its food is exclusively of an insectivorous nature. It nests in small holes in trees, the nest being composed of a few feathers, bits of moss, and cast snake sloughs. This bird is a favourite host of the Honey-guides.

The Tits usually nest in holes in trees, occasionally in cavities in rocks, laying white eggs sparsely marked with pale red.



FIG. 89.—Black Tit at nest hole.

SHRIKES

The Shrikes (Family *Lanidae*) are well represented in South Africa by three subfamilies with eleven genera.

The handsomest member of the family is perhaps the Long-tailed Shrike (*Urolestes melanoleucus*), in its garb of glossy black and pure white, and very long tail. Total length, 15 to 18 inches, whereof the tail measures from 10 to 13 inches.

It is fairly common in the Transvaal Bushveld, doing a great deal of good by devouring locusts, grasshoppers and other insect-life. It builds a large rough cup-shaped nest

a bush, and lays three or four eggs, generally of a creamy pink colour marked with dots and streaks of various shades of brown and grey.

The commonest and most widely distributed member of the family is the ordinary Fiskal (*Lanius collaris*) whose



FIG. 90.—Fiskal Shrike on nest.

shambles is a well-known sight to every South African. One may chance upon a mimosa tree which has been used by one of these birds as a larder, and find impaled on its long thorns grasshoppers, lizards, &c.; a barbed wire fence is often requisitioned nowadays to fill the office.

This bird is not liked by the aviculturist or canary-keeper, as it is pugnacious, and has often been known to kill canaries in their cages.

As another illustration of popular ignorance of South African bird-life, the late Dr. Exton, whose name is well known to South African ornithologists, told a good story at a meeting of the Johannesburg Field Naturalists' Club, just prior to the Boer War. He said that while residing in Bloemfontein, he was one day fetched by a friend to shoot some bird that had killed one of his canaries, and on arrival at the friend's house the latter pointed to a pert specimen of the Fiskal coolly sitting on the railing and said, "Don't shoot him—he is so tame; those are the brutes," and pointed to a couple of innocent Bulbuls which were hopping about the branches of a tree.

The Fiskal Shrike builds rather a neat, cup-shaped nest of weeds, grass, twine, &c., lined with feathers, and lays usually three eggs of a pale greeny tint, marked with pale brown spots and purplish-brown blotches on the thick ends.

It is commonly known as the "Jack-hanger" and "Butcher-bird" in the Cape, the "Jacky-hangman" in Natal, and the "Lachsman" in the Transvaal. It is brownish-black above with a white patch on the wing, and white below. Length, 8 inches.

The Red-backed Shrike (*L. collurio*) is a migrant from Europe, and does not breed out here. It can easily be recognised from the other Shrikes by its chestnut-coloured back and pinkish underparts. Length, 7 inches.

The Brubru Shrike (*Nilaus brubru*) is of a glossy black and white with a distinct frontal band across the forehead, extending on either side of the head in the shape of a pronounced white eyebrow running right on to the temporal region of the head.

It is found from the Orange River northwards and lays three to five eggs of a white ground colour spotted with brown.

The sub-family *Malaconotinae* contains some very well-known birds, such as the Bush-Shrikes (*Telephonus*).

The best known species is the Black-headed Bush-Shrike (*T. senegalus*), known to the Zulus as the "Inqupan." It extends from Port Elizabeth to Zululand and the Transvaal, and from Mashonaland to Northern Damaraland.

It usually lays three eggs of a white ground colour marked with pale purple and reddish-pink.

The Tchagra Bush-Shrike (*T. tchagra*) is a little smaller and differs also in having a rufous crown instead of the black crown characteristic of *T. senegalus*. It lays three eggs of a creamy white colour irregularly marked with pale lavender and purplish-brown streaks, which are in some specimens sparsely, in others thickly distributed.

Both these birds are beautiful whistlers—indeed, to such an extent is this developed that one not accustomed to the bird would mistake their call for the whistle of a human being. They are fond of bushy country and are friends of the agriculturist, devouring large quantities of insects, although they also eat berries and other vegetable matter.

A still smaller species is found in the Transvaal, Bechuana-land and Damaraland, extending to Angola and the Upper Zambesi Valley. This is the Three-streaked Bush-shrike (*T. australis*). It is also a lover of bush country and was recorded by Erikson as breeding on the Limpopo River in December and near Lake Ngami in March. A nest taken on New Year's day, 1906, on the bank of the Crocodile River three or four miles north of Hartebeest Poort in the Pretoria District was a very neat little saucer of rootlets, and contained three eggs of a pure white prettily marked with reddish-brown spots.

We next have the Puff-backed Shrikes (*Dryoscopus*), the first representative of which is the *true* Puff-back (*D. cubla*), the male being well known for the beautiful powder-puff like patch of downy white feathers on the back, which the bird can erect at will. In Natal it is sometimes called the

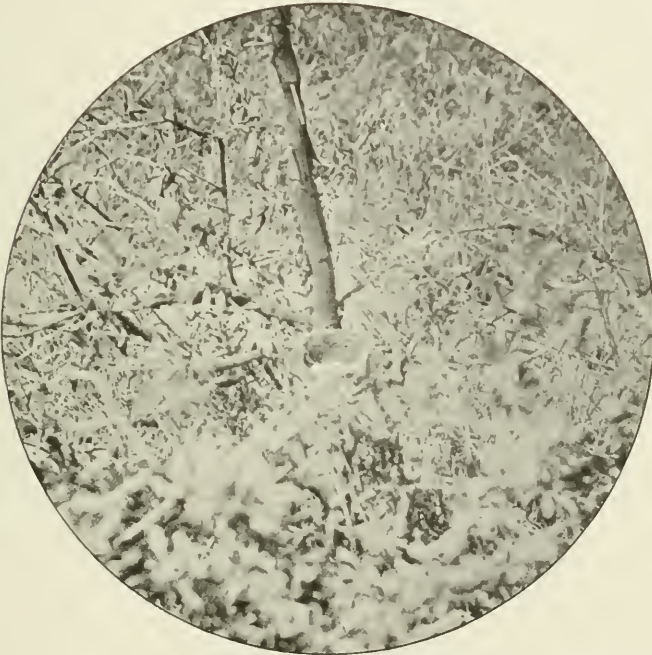


FIG. 91.—Nest and Eggs of Three-streaked Bush-Shrike. (Photo. Haagner.)

“Snowball Shrike.” General colour, black above and white below. Length, $6\frac{1}{2}$ inches.

It builds a cup-shaped nest of rootlets and fibres, the outside being composed of strips of the palm-like leaves of a *Dracena*, thickly matted with spider webs, and is always built *round* the fork or branch on which it is placed. The eggs—three in number—are pinkish-white, thickly speckled



FIG. 92.—Puff-back Shrikes and Nest.

in the obtuse ends with small dots of deep pinkish-brown. It is fairly common in the forest and bush regions from Knysna to the Zambesi Valley, and across to Damaraland and Southern Benguela.

The Greater Puff-back (*D. ferrugineus*) differs from the first-mentioned species in its larger size, buffish underparts and orange-buff tinge on the rump. Its eggs are pale blue, thickly speckled with reddish-brown.

The two remaining species are but little known.

The last genus of the Sub-family is a large one comprising some ten species of *Laniarius*, the first of which is the beautiful Crimson-breasted Shrike (*L. atrococcineus*), whose trivial name will easily serve to distinguish it. It is black above with a white bar on the wing, below bright crimson. Length, 8 inches.

It is fairly common in the bushveld north of Pretoria, whence we obtained some good examples. It is very quick and collecting specimens is often in consequence no easy matter. Buckley records a nest taken on November 7, built of soft dead weeds containing three eggs of a white ground colour, thickly spotted with light brown. It is not an easy bird to keep in captivity, requiring a plentiful supply of insects.

The commonest member of the genus is the well-known Bakbakiri (*Laniarius gutturalis*), called by most Colonials the "Kokevic," from its call. It is easily recognisable by its yellow and green plumage and black chest-band. Length, $8\frac{1}{2}$ inches. The male and female are very fond of calling to each other, their respective cries differing considerably. Stark gives an excellent description of these in his "Birds," vol. ii., "Fauna of South Africa."

The nest is like that of other shrikes, and usually contain

three verditer blue eggs mottled with rusty red. It is also an insect and worm feeder like the other members of the family, and if it were not for the bird-killing propensities of



FIG. 93.—Bakhakiri Shrike on its nest.

some of the members, we would not have had the slightest hesitation in including them under the chapter of "Friends of the Agriculturist."

The next species is the beautiful Four-coloured Bush Shrike (*L. quadricolor*) which is green above, and has the cheeks and throat scarlet, followed by a broad band of black : the remainder of the under parts being yellow. Length, $7\frac{1}{2}$ inches. It is essentially an Eastern species ranging from Natal to British East Africa.

They breed early in November, according to Millar, and lay "two or three pretty white eggs delicately marked with grey-brown streaks and splashes, principally at the obtuse end."

The Ruddy-breasted Bush Shrike (*L. rubiginosus*) is olive-green above with reddish-buff underparts, excepting the abdominal region which is whitish, faintly barred with grey. Length, $7\frac{1}{4}$ inches. It ranges through the bush regions of the Cape from George eastwards through Natal and Zululand into the Transvaal, where Ayres procured it at Lydenburg, and C. H. Taylor at Amsterdam.

It constructs a shallow saucer-like nest of rootlets, &c., which is so slightly built that one can usually see the eggs through it. These are of a very pale creamy-green, speckled and blotched, chiefly at the obtuse end, with pale sienna and pale purplish-slate.

It is a very shy bird and difficult to see, although its beautiful call can be heard all through the summer months. It nests during December and January.

The Olive Bush-shrike (*L. olivaceus*) is like the preceding species above, but is orange yellow on the breast going off into yellowish on the abdomen.

The pretty little Orange-breasted Bush-shrike (*L. sulphureipectus*) can be immediately distinguished by its reddish-orange breast, and by the bright yellow of the remainder of the underparts. Top of head blue-grey. It ranges as far south as Grahamstown and Lake Nyassa in the north.

Alexander, who took its eggs on the Zambesi, records them as three in number and of a greenish white spotted and blotched at the larger end.

The Southern Grey-headed Bush-shrike (*Malaconotus hypopyrrhus*) is a large bird of a greenish colour on the upper surface, blue-grey head and yellow underparts, the upper chest has a band of tawny orange traversing it. Length, $9\frac{3}{4}$ inches. This bird ranges from Grahamstown in the Cape through Natal to Zanzibar, East Africa. In the Cape it is known as the Spook-vogel.

It is more like the Fiskal in its habits and pugnaciousness, and like it this Bush-shrike attacks other birds.

The eggs, taken by H. Millar, were creamy marked with grey and brown irregular spots.

The genus *Nicator* is represented within our limits by but one species, the Zambesi Green-shrike (*N. gularis*), which does not interest us further as it is scarce in South Africa, although extending from the border of Somaliland to Zululand whence the Woodward record it. Swynnerton found it in Gazaland, while Sheppard took its eggs near Beira.

The genus *Lanioturdus* with also but one species does not concern us either.

The last Sub-family, *Prionopinae*, contains but two genera with three species, *Sigmodus retzii*, *S. tricolor*, and *Prionops talacoma*, which are all scarce birds within our limits.

BABBLERS

Of the Family *Crateropodidae* our first genus is *Crateropus* with five species, only two of which, however, need concern us here. Jardine's Babbler (*C. jardinei*) is a grey-brown bird with streaky head and breast. Length, 9 inches. It ranges from Central Natal and the Transvaal northwards to the Zambesi. It is a noisy bird, its harsh chattering cry

earning for it the Dutch name of "Kakelaar" (chatterer). It is common in the Pretoria district, frequenting at times even the National Zoological Gardens. It builds a cup-shaped nest and lays blue eggs.

The Pied Babbler (*C. bicolor*) is white with blackish-brown wings and tail. Like its congener above mentioned, it is fond of thick bush, is a noisy bird, and feeds upon insects, worms, &c., which it searches for on the ground. It is fairly common in the Pretoria Bushveld, whence the National Zoological Gardens has received examples.

Our next genus under the heading of Bush birds is *Andro-*

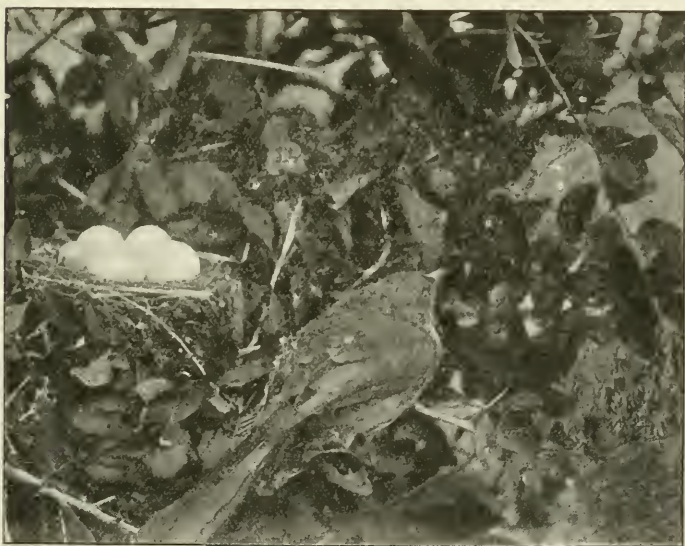


FIG. 94.—Sombre Bulbul at nest. (Four Cuckoo eggs in nest besides its own.)

padus, with two species, only one of which, the well-known Sombre Bulbul (*A. importunus*), concerns us at present. It

is known to the Dutch as Boschvogel from its bush-loving habits, and is fairly common in the bush districts of the Cape. It is olive-green above and olive-grey below. Length, $8\frac{1}{2}$ inches.

Near Grahamstown, where it is known as the "Pilawit," it is one of the hosts of the Cuckoos (*Coccyzus jacobinus*, *hypopiniarius*, *serratus*, and *Cuculus clamosus*). It nests from November to January, building a small neat shallow structure of beard moss and twigs, and lays two eggs of a creamy grey ground, prettily marbled with very pale and dark purplish-brown blotches. A nest taken on January 5, in the Featherstone Valley, near Grahamstown, was built at the extremity of a low branch overhanging the river, and contained two of the Bulbul's eggs, and one of "*Coccyzus serratus*."

ROBINS

The commonest member of the Robin-Chats is the "Cape" species (*Cossypha caffra*) called the Cape Robin or Jan Fredric.

It is olive-brown above, the rump region and tail (except the two centre feathers) being rufous; a white eyebrow; sides of face black; throat and chest and under tail coverts bright rufous, the centre of abdomen whitish; remainder of under surface slate-grey. Length, $7\frac{1}{4}$ inches.

This bird is fairly generally distributed throughout South Africa. It is of confiding habits, being fond of the neighbourhood of gardens and houses, where it is always on the search for insects. It has a pleasant song. The Cape Robin builds early in the Cape; its eggs may be looked for from the end of August: in the Transvaal the best month is October. The nest—cup-shaped, of roots and lined with hair—is generally placed in a bush about 18 inches to 3 feet from the ground, on the side of a tree-trunk, or on a stump. The

eggs, usually three in number, are pale blue, thickly spotted and blotched with pale rust colour : sometimes this mottling is arranged in the shape of a wreath round the blunt end of the egg.

The Noisy Robin-Chat (*C. bicolor*) is the Piet-myn-vrouw in some of the Dutch districts, and the Mocking Bird of the

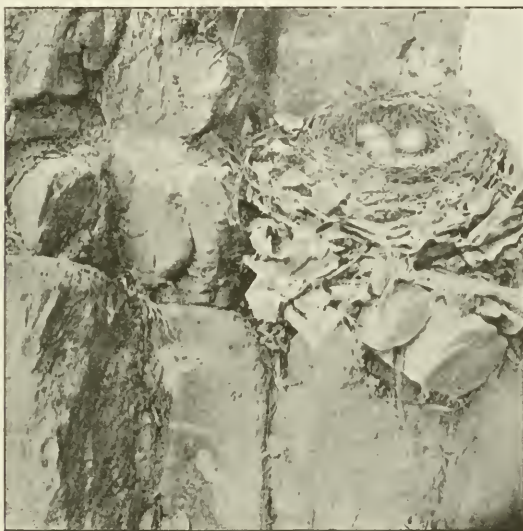


FIG. 95.—Nest and eggs of Noisy Robin-Chat.

Colonial boy. This species is conspicuously coloured, being dark slaty-grey above and bright orange-rufous below ; sides of face black. Length, $7\frac{1}{4}$ inches.

It is a fairly common bird in the bush country of the Cape Province ; in the Grahamstown kloofs its musical imitation of various bird-calls may often be heard. It will imitate almost any bird-call, even the screech of the Crowned Hawk Eagle.

It feeds chiefly on insects, varied by a few berries and forest fruits.

Its nest—much like that of the preceding species—is either situated on a rocky ledge on the side of a krantz (as depicted in the photograph), or on a sloping tree-trunk or stump.

The eggs, generally three in number, vary from an olive greenish-brown to a clear glossy russet-chocolate.

The Natal Robin-Chat (*Cossypha natalensis*) is blue-grey above; head orange-brown streaked with bluish; nape and rump orange-brown; upper tail-coverts chestnut; entire under-surface orange-red.

This species ranges from Durban to Mombasa in the East, and from Benguela to Loando in the West.

It resembles the former bird in habits and nidification.

The Brown Robin-Chat (*Cossypha signata*) is chocolate-brown above; a bar of white on the wing; a white eye-brow, above which there is a black line; under-surface white; throat, breast and sides of body ashy. Length, 7 inches.

This is a retiring bush-loving bird of the Eastern Cape Province and Natal.

In the Albany Kloofs it is not uncommon. The eggs are greenish-white, covered with pink-grey blotches, chiefly at the obtuse end.

The Black Bush-Robin (*Tarsiger silens*) has the upper parts black, except the wing, which is adorned with a white patch; throat and under tail-coverts white; breast and abdomen grey. The female has the regions which are black in the male replaced by brown.

This bird is known as the Sacred Jackhanger to the

Colonial schoolboy. The male bears a strong resemblance to that of the Fiskal Shrike when on the wing, or flitting about the trees. It builds a compact cup-shaped nest in



FIG. 96.—Female Black Bush-Robin on nest. (Photo. Hewitt Ivy.)

a tree or bush, which is generally composed of bents of everlastings, and lays three eggs of a pale green colour indistinctly mottled with pale rusty-brown.

Where this bird got the name it is known by in the text-books (viz. *Silent* Bush-Robin) is not quite clear, as it is one of the noisiest of birds, being also an excellent mimic.

It is a true insect feeder, and is more often placed amongst the Flycatchers by present-day systematists, where it no doubt more properly belongs.



FIG. 97.—Fork-tailed Drongo with nest and eggs.

DRONGO-SHRIKES

The family *Dicruridae*, Genus *Dicrurus*, contains two species of Drongo-shrikes, called Bijvangers.

They are both black birds, the Fork-tailed Drongo (*Dicrurus afer*), as its name indicates, having a pronounced forked-tail, the plumage differing from the Square-tailed Drongo (*D. ludwigii*) in being much more glossy, and pitch-black throughout, whereas the latter bird has the lower surface tinged with greyish. Former, $9\frac{1}{2}$ inches long; latter, 7 inches.

The Fork-tailed species is fairly generally distributed throughout South Africa, excepting the neighbourhood of Cape Town and the desert portion of the north-west of the Cape Province. It is very common in the "Bush" regions of the east of the Cape Province, Natal and Transvaal. We found it extremely so in the Albany kloofs, and along the Hennops River near Irene, and the Crocodile River in the district of Pretoria.

It lives in pairs, the male pursuing any intruder of his kind who invades the territory he claims as his own. It has a shrill voice and is an excellent mimic. It has the habit of sitting on some exposed branch from which it makes short darts into the air after insects, which form its main article of food. Its inordinate fondness for bees has earned for itself the vernacular name of Bijvanger (Bee-catcher). It is also singularly attracted by a grass fire, dashing through the smoke after insects.

It is extremely bold in defending its nest, and will fly round one's head when robbing the nest, approaching at times near enough for its wings to brush against one. It builds a light, though strong, saucer-shaped nest of rootlets and twigs, usually situated near the extremity of a bough, slung between two twigs. Its eggs, two to four in number,



FIG. 98.—Nest of Square-tailed Drongo. (Photo. A. D. Millar.)

vary from a pure white to a creamy or salmon-pink, sparingly spotted with brown, pink or purplish. The photograph depicts a nest on a hillside overlooking the Kowie River at Port Alfred.

The Square-tail ranges from Pondoland (where it was procured by Sergeant Davies, C.M.R.) to Portuguese East Africa, the Eastern Transvaal and Rhodesia.

It is a shyer bird than its relative, keeping more to the thicker bush, and is not usually attracted by grass fires.

It builds a more solid structure than the Fork-tail, lichen forming the bulk of the material used, but the eggs do not vary to the same extent as those of the *afer*.

HORNBILLS

Of the family of Hornbills (*Bucerotidae*) two genera are forest-loving birds, the first representative being the Trum-peter Hornbill (*Bycanistes buccinator*). This bird is black with a greenish sheen above ; the rump, upper tails coverts and lower breast white ; the beak is ornamented with an enormous casque, the upper edge of which almost reaches to a level with the tip of the beak. Length, 26 to 27 inches.

The Crowned Hornbill (*Lophoceros melanoleucus*) is the best-known member of the family in the bush districts of the Cape, where it generally assembles into parties of from six to twenty individuals during the winter months, visiting the towns and feeding on late fruit and insects turned up in the cultivation of ground.

They do an amount of good by feeding upon locusts and caterpillars, but as they do some harm to fruit, especially bananas, we have not included them under the heading of



FIG. 99.—Crowned Hornbill in its forest home. (Photo. J. R. Ivy.)

friends of the farmer, although the good they do undoubtedly outweighs the harm.

The nidification of this bird is already a time-worn theme,



FIG. 100.—Crowned Hornbill at nest hole.

but we cannot refrain from giving the somewhat sad history of the picture illustrating the species in this work.

Early one morning, when we were ready to take a photograph at a nest-hole which had been discovered, containing young, we could not see the parent birds about, which was strange, as we knew for certain that they had young ones.

After waiting a while one of the old birds appeared, and perched close to the nest, then flew away screaming.

We got the camera into position by building a platform of logs and stones, as the nest was about 8 feet above the ground and just below it was a steep waterfall.

One of the party next picked up a dead young one amongst the undergrowth below the nest, and we only then noticed that a swarm of bees was issuing from and entering the hole. After exercising a little patience we obtained the desired snap, and then proceeded to cut away the tree-trunk, after smoking out the bees. Some heavy labour with an axe enabled us to effect an opening and the remaining young bird was extracted. The poor creature was much swollen and red, the skin being one large blister, resulting from the stings of the bees. It was dosed with ammonia and recovered sufficiently to ravenously devour some fruit, but it never entirely recovered, and died a few days later.

Some time afterwards we visited the nest and cut the tree above and below the hole to see if there was any other opening for the birds to enter, as the one seen in the photograph was very small, being only $1\frac{1}{2}$ in. in diameter, neither was it built up, as is usually the case. It is somewhat of a mystery to us how the old birds entered that hole, as we could not discover another entrance. It is most unusual for them to leave the opening as it is, for they generally build it up with excreta and a gummy substance; it is a peculiar sight to watch them plastering it up—a ball of the material is taken in the bill, rubbed on the wood, then basted with the alternate sides of the flat beak.

They lay two to four eggs in December or January, which are rough in texture and pure white in colour.

This Hornbill is commonly called the Toucan by Colonists and is dark brown above, and the head is mottled with white; the throat, chest and sides of body dark grey and

rest of under parts white. Bill and casque red, with a yellow band at the base. Length, 21 to 23 inches.

The best known "up-country" species is the Red-billed Hornbill (*L. erythrorhynchus*), which has a grey head and is



FIG. 101.—Nest hole of Crowned Hornbill.

(To show plastering up of entrance, with slit left through which to feed imprisoned female.)

dark brown above, with the wing feathers spotted with white and the under parts white. It can easily be distinguished from the foregoing species by the red beak being without a casque. Length, 18 to 19 inches.

It ranges from the Transvaal to Rhodesia, and Portuguese East Africa to South-West Africa.

There is another species which is not uncommon from Natal northwards to the Zambesi, the Yellow-billed Hornbill (*L. leucomelas*), which is immediately recognisable by its yellow bill without a distinct casque. It is a little larger than the preceding species, and is common in the Bushveld of the Transvaal, where I have seen it picking out the grains from the ripening Kaffir corn, although it is essentially a frugivorous and insectivorous feeder.

TROGONS

Of the family Trogonidæ, South Africa possesses but a single species, the beautiful Narina Trogon (*Apaloderma narina*).

It is metallic green above and below as far as the chest, the remainder of the under parts being bright crimson. The female has the side of the head, throat and chest of a yellow-brown instead of green. Length about $11\frac{1}{2}$ inches.

It ranges from the Gamtoos River in the Cape Province through Natal on the East to Southern Abyssinia, and reappears in Angola on the West Coast.

It is a denizen of thick bush or forest, where it sits quite still or creeps about searching for the insects which forms its chief article of food. It is a scarce bird and little is known of its habits.

PLAINTAIN-EATERS

The family Musophagidæ (*Plaintain Eaters*) contains some of the handsomest birds in South Africa, the best known of which is the Knysna Plaintain Eater or Common Lourie

(*Turacus corythais*). It is too well known with its green plumage, white-tipped crest and red and black wing feathers to need any detailed description. Length, about 18 to 19 inches.

It is a thorough forest-loving species, frequenting the wooded kloofs where its loud hoarse croaking cry can be heard morning and evening. It lives on wild fruits of various kinds, and builds a flat nest of sticks from 6 to 16 feet above the ground, and usually lays two eggs of a pure white colour and rounded oval in shape. The peculiar part of the red colouring matter of the wings is that it contains a large amount of copper (about 7 per cent.), originally analysed by Professor Church. A friend of ours, a chemist, confirmed the copper content of the feathers, but with regard to the theory that the red can be washed out with soap and water, we are sorry to say we cannot confirm this *in toto*. It certainly does get paler during wet weather and in old skins, but we have never seen it *wash out* in nature, and have tried to do so artificially with soap and water, but without result.

This species ranges from George in the Cape Province to Lydenburg in the Transvaal. There is another species in the northern portions of the sub-continent, Livingstone's Lourie, characterised by the crest being much lengthened and pointed in front.

The Purple-crested Lourie (*Gallirex porphyreolophus*) is the commoner species in the Northern Transvaal, ranging from Natal to the Zambesi along the Eastern line. It has the top of the head and crest glossy purple, lower back wings and tail lilac-blue. Length, about 17 inches. It is not uncommon in the Woodbush on the Great Letaba River in the Zoutpansberg District and has been procured at Nelspruit by Mr. A. Duncan of Johannesburg.



FIG. 102.—Knysna Plaintain Eater or Lourie with nest and eggs.

The last representative of the family is a plain ashy-grey bird (*Chizuerhis concolor*), the "Go-away" bird of the English, and "Groote Muisvogel" (Big Mouse-bird) of the Boers, which latter name is very appropriate as it is very much like an overgrown mouse-bird. It has a long crest of decomposed feathers. Length, about 18 inches.

It inhabits Central and Northern South Africa southwards to Zululand, but is not found in Natal, the Cape Province or Orange Free State. In the Pretoria District along the Crocodile River, north of Hartebeest Poort, and throughout the Bushveld, it is fairly common, uttering its harsh cry of "guay, guay!" whenever it is disturbed or when going to roost in the evening. It is rather wild in that region, consequently not easily shot. The natives are fond of its flesh, which is dark and not bad eating when properly cooked.

PARROTS

The Parrot Tribe (*Psittaci*) is very poorly represented in South Africa.

The best-known species is probably the Red-shouldered Parrot (*Poicephalus robustus*), which is fairly dull coloured and about the size of the ordinary Grey Parrot of talking fame. The rump, upper tail coverts, lower breast and belly are grass-green, and there is a vermilion band round the edge of the wing. Length, $13\frac{1}{2}$ to 14 inches.

It is found from Zuurberg in Cape Province to Mashonaland. It is probably commonest in the Pirie Forest, near Kingwilliamstown.

These birds are gregarious in habits and denizens of the thick bush and forest tracts.

The Brown-headed Parrot (*P. fuscicollis*) is green all over except the head and neck, which is grey tinged with yellowish. Under wing coverts yellow. Length, about 9 inches.

The little Meyer's Parrot (*P. meyeri*) in its brown and blue plumage, with a yellow band on the head and a yellow edge to the wing, is a fairly common bird in the Western Transvaal, extending into Bechuanaland and Rhodesia. In the Pretoria Bushveld it is quite common, and feeds upon fruit, ground nuts and certain seeds.

The little Rosy-faced Lovebird (*Agapornis roseicollis*) is grass-green with the forehead, sides of face and throat rose-red, rump regions cobalt-blue. It extends from North-Western Cape Province to the Namaqualand and Damaraland. Length, about $6\frac{1}{2}$ inches.

Black-cheeked Lovebird (*A. nigrigenis*). In 1903 this Parrakeet was not known to science, when Dr. A. H. B. Kirkman, late of Queenstown, brought a couple of skins down from North-West Rhodesia, and Mr. W. L. Selater, then Director of the South African Museum, described it. Since then several collections of living examples, numbering thousands, have been brought down and exported oversea. It breeds well in captivity and feeds upon seeds (principally canary and grass) and greens. It is greenish in colour with dark brown cheeks and a patch of orange-pink on the chest. Length about 6 inches (150 mm.). It nests in hollow trees, and from three to four white eggs are laid.

DOVES

The Doves (Order *Columbæ*) are fairly numerous in South Africa, being represented by two families containing fourteen species in eight genera.

Doves are characterised by their short legs and peculiar beaks, the basal portion of which is soft and pad-like, forming what is called the "cere," the rest of the beak being hard and somewhat swollen towards the tip.

The young are devoid of feathers and very weak and helpless when hatched.

The first family (*Treronidæ*) contains the Green Fruit Pigeons, and is distinguished from the second family by the possession of fourteen tail feathers.

The Southern Green Fruit Pigeon (*Vinago delalandii*) is of a general green colour, excepting a broad collar of drab : and the wing-quills, which are black ; below the colour is of a greyer tinge mottled with yellow on the abdominal portion ; the “ shoulder ” is washed with pinkish. Length, 1 foot.

This bird extends from British East Africa southwards to the forests of the Eastern Cape Province. In the Albany division it is decidedly uncommon, being, however, a little more plentiful in Pondoland.

It is a partial migrant, its appearance and disappearance being coincident with the ripening of forest fruits and berries. It is especially fond of the wild fig, amongst the branches of which the bird is very difficult of detection, owing to the harmony existing between the coloration of its plumage and that of the foliage.

The cry is a soft whistle, and the flesh is tender and of a delicate flavour. It builds the usual dove-like type of nest—a platform of sticks—and, according to Ayres, lays white eggs.

The members of the second family (*Columbidæ*) possess only twelve tail feathers.

The Speckled or Rock Pigeon (*Columba phæonota*) has the head, neck, rump and tail slate-grey, back maroon ; wings slatey mottled with white, below slate-grey. Naked skin

round the eye and the legs red. Length, 13 to 14 inches. It is found throughout South Africa, excepting Rhodesia.

This bird is called the Bosch-duif or Bush-dove, but is more strictly speaking a rock-loving species, breeding on krantzes (cliffs), or on the top of a wall in an out-building.



FIG. 103.—South African Speckled or Rock Pigeon.

A favourite site are the ledges in a disused mine-shaft or well. The eggs are white, two in number, and may be looked for during the months of August to March.

It does a considerable amount of damage to grain crops, but is, on the other hand, of decided use in devouring insects, including locusts and their young (voetgangers). It is about the size of a tame pigeon and has a similar cooing call.

The Olive Pigeon (*C. arquatrix*) is slightly larger than the preceding bird, and has a number of vernacular names.

It shares with the Speckled Pigeon the Boer cognomen of



FIG. 104.—Speckled or Rock Pigeon.

Bosch-duif, and is also occasionally called the Oliven-duif. In Natal it is termed the Black Pigeon, but in the Eastern districts of the Cape it is generally known as the Bush Pigeon.

The back is of a purplish shade, the lower half of the wings being slate-coloured spotted with white; tail black;



FIG. 105.—Olive Pigeon.

chin and throat pinkish, breast purplish spotted with white, the purple shading into slate on the abdomen. Length, $15\frac{1}{2}$ inches.

It ranges from Knysna, in Cape Province, to Zululand and the Transvaal, but is only an inhabitant of forest and bush country. In habits it resembles the Speckled Pigeon, excepting that it builds in trees and lays greenish-white eggs.

The Turtle-Doves are represented in South Africa by four species and one subspecies, only one of which has no black collar on the back of the neck.

The Red-eyed Dove (*Turtur semitorquatus*) has the head grey (cheeks and nape shaded with pink); above drabish-brown, and below pinkish-grey, fading into whitish on the chin and blue-grey on the flanks and belly. Bare skin round the eye red. Length, about 13 inches.



FIG. 106.—Red-eyed Dove at nest.

This Dove is fairly common in the Eastern Districts of the Cape and the coastal portion of Natal. Although found in Mashonaland, it has so far not been recorded from the Transvaal.

The Cape Turtle-Dove (*T. capicola*) is a well-known and widely-distributed bird in South Africa. It is smaller than the Red-eyed Dove, is without the red skin round the eye,

and has a black streak from the base of the bill to the eye. Length, 11 inches.

It is known as the Tortel-duif, and has a pleasant cooing note which is very much in evidence towards sunset. The somewhat harsh call of the Turtle-Dove is described by some authors as monotonous, which we hardly think is the opinion of Colonial-born men, who love the music of its call.

The Turtle-Doves feed on grain and seeds, and according to Mr. Thomsen devour a fair proportion of voetgangers.

Their nests are frail platforms of sticks, and the eggs are white and two in number, and may be searched for from September to March.

The Laughing Dove (*T. senegalensis*) is smaller than the Cape Turtle-Dove, and is without the black half collar on the back of the neck; the feathers of the sides and front of the neck are supplied with black bases and reddish tips, forming a broad indistinct and mottled collar. Length, about $10\frac{1}{2}$ inches.

It ranges from Egypt to Cape Town, and although common in many districts is not so plentiful as *capicola*.

In habits this Dove resembles its Cape cousin, but has a strange laughing sort of call-note. We took nests in the Transvaal in November and April.

The Namaqua Dove (*Eua capensis*), male, is well known with its black head and upper breast, white belly, and long tail; the female is without the black markings. This bird is the smallest of the doves, so far as the body is concerned. It is of the same length, to the end of the longest tail feather, as the Laughing Dove.

It is fairly common throughout South Africa, excepting the coast districts, where it is rarer and a migrant.

It is also a grain and seed-eating bird, and builds a platform-nest of twigs and rootlets, and lays white eggs.

The Tambourine Dove (*Tympanistria tympanistria*) has the forehead, eyebrow, and entire under-surface white; above brown. Length, $8\frac{3}{4}$ inches.

This Dove is only found in the Bush districts of the south-eastern portion of the sub-continent and in the Zoutpansberg and Lydenburg Districts of the Transvaal.

Its trivial name is derived from the peculiar rattling call, "coo coo" oft repeated.

It does not differ from the other species in nesting habits, or food.

The Emerald-spotted Dove (*Chalcopelia afra*) is brownish above, with two black bands on the rump, and pinkish below; there is a steel-green or metallic blue spot on the wing. Length, $8\frac{1}{2}$ inches.

It is also a bush-loving species, ranging from Worcester through Knysna to Zululand, the Transvaal, and Rhodesia.

It may often be found on the ground feeding on grass-weed seeds in the neighbourhood of rivers or in clearings in the bush.

The Cinnamon Dove (*Haplopelia larvata*) has the forehead white, top of head, neck, and upper part of back metallic-pink with greeny reflections; remainder of upper surface brownish; chin whitish, breast pinkish, shading into cinnamon on the belly. Length, 12 inches.

It is an inhabitant of the forest country, ranging from Knysna in the Cape to Natal, and the Eastern Transvaal.

It feeds on berries and seeds which it picks up from the ground, and nests in low trees and creepers, building a



FIG. 107.—Emerald-spotted Dove.

rough platform of sticks, and lays two white eggs. In the Albany kloofs it is a scarce bird, although we found a nest on January 6, 1907, about six feet from the ground.

The Doves may, on the whole, be considered as friends of the farmer, as, although accused—often with justice—of stealing ripening grain and uprooting sprouting peas, barley, and wheat, they do a large amount of good.

CHAPTER VI

ORNAMENTS OF THE VELD

CROWS

THE first member of the Family Corvidæ we have already dealt with in the opening chapter.

The Pied Crow (*Corvus scapulatus*) could also, with some justice, have been included in the same chapter. It is glossy black (with purplish and steely-blue reflections) except the back of the head, sides of neck, upper back and breast, which are white. Length, 18 inches.

The Dutch vernacular name, viz. *Bonte Kraai*, is equivalent to the English one.

It inhabits practically the whole of Africa south of the Sahara Desert; in the sub-continent it is fairly generally distributed, but is not found in the coastal portion of Natal. I found it fairly common around Monze Siding, Northern Rhodesia, in November, 1918.

This crow eats almost anything, from offal and carrion to shellfish, insects, and animal parasites, such as ticks, &c.

Its nest—usually a roughly-constructed saucer of sticks lined with moss, wool and similar material—is either situated on the ledge of a krantz or in a tree. Eggs from three to six, of a bluish-green ground colour, streaked and spotted with various shades of brown.

The Black Crow (*Corvus capensis*) is of a general glossy black colour. Length, 18 inches.

This bird is somewhat local in distribution, being common in some districts and not known or scarce in others.

We found them fairly plentiful in Albany, and not at all scarce in the Central Transvaal.

During the winter months they congregate into family parties, pairing off in October.

The nest is a cup-shaped structure of small branches,



FIG. 108.—Black Crow.

lined with fine roots, fibres and hairs. Eggs usually three, buffish-pink, spotted with reddish-brown and pink.

Its chief food consists of insects and grain. Like the Pied Crow, it may often be found in the company of cattle. It is not a particular friend of the farmers, owing to its habit of pulling out and devouring the growing mealie seeds.

In the Albany Division we have found this bird to be one of the hosts of the Great Spotted Cuckoo (*Coccyzus glandarius*).

OXPECKERS

The Oxpeckers (*Buphaginæ*) are a sub-family of the Sturnidæ or Starlings.

There are two species, both being brown in coloration, and



FIG. 109.—The Home of the Korhaans: a typical flat.
(Springbuck shooting.)



FIG. 110.—Aquatic Weeds on the Aapies River (Pretoria district);
the home of the warblers. (Photos. Haagner.)

easily distinguishable from one another by the following key of Dr. Stark's :—

- a.* Bill more robust ; yellow at the base, red
at the point. Inner web of tail-feather
rufous *Buphaga africana*.
- b.* Bill less robust ; entirely red. Inner web
of tail-feathers dark brown *B. erythroryncha*.

The latter is the commoner bird on the Natal coast, being more local in the Transvaal. The former is the more generally distributed bird of the two.

They are known to the farmers as Tick birds, on account of their habit of climbing about cattle and wild animals in search for the parasitic pests which infest them.

They nest in a natural hole in a tree, under the roof of a house, or in a hole in a wall. Dr. Stark describes their eggs as pale bluish-white, but Millar and Sparrow state that those of the Red-billed Oxpecker are spotted with purplish-red.

LARKS

The members of the Family *Alaudidae* are all more or less inhabitants of the veld proper, *i.e.* open down country, and the slopes and crests of low kopjes—and are not found in forest tracts or heavy bush-country.

They are easily distinguished from any other “ perching ” birds (Passerine) by the rounded formation and scaling of the hinder part of the leg (tarsus). The majority are difficult of correct identification and concise description, being usually of sombre coloration—of some shade of brown.

Of the Genus *Pyrrhulauda*, South Africa possesses three species.

(1) Dark-naped Lark (*P. australis*) ; with black ear-coverts.

(2) Grey-backed Lark (*P. verticalis*) ; ear-coverts white ; back ashy grey.

(3) Chestnut-backed Lark (*P. smithi*) ; ear-coverts white ; back dark chestnut.

All three species have the under-side black.

They feed on seeds, and build their nests in a hollow under



FIG. 111.—Rufous-headed Lark at nest.

a tuft of grass or small bush, laying three or four white eggs, speckled and blotched with light brown.

They assemble into flocks during winter, pairing off to build in the spring.

In the neighbourhood of Brandfort, Orange Free State, we found the Chestnut-backed Lark fairly common in April, 1906, although it was still in pairs.

The Genus *Mirafra* contains a large number of species which do not admit of any concise descriptions, consequently, we have not the space at our disposal for the necessary detailed account, and must refer the reader to Stark and Selater, vol. ii., "Birds" in the "Fauna of South Africa" series, for a full account of the family. They usually nest under a tuft of grass or other herbage, building a cup-shaped structure in a slight depression in the soil. We append a photograph of the Rufous-headed Lark (*Mirafra rufipelia*) taken near Springfontein, Orange Free State.

LONGCLAWS

The next family is the *Motacillidæ*, containing three genera of well-known birds in South Africa. The first of these are the Longclaws (*Macronyx*), of which this country possesses three species easily distinguishable from one another by their vernacular names.

The Orange-throated Longclaw (*M. capensis*) is fairly well distributed over the higher veld of South Africa, excepting the western territories. It is known as the Cut-throat Lark or Kalkoenje (little Turkey).

The next species is the Yellow-throated (*M. croceus*), which is the commoner bird in low-lying districts, such as Natal, Zululand, &c. C. G. Davies, C.M.R., reports it as scarce in Pondoland, except near the Natal border, and we have found it decidedly so in the Pretoria District, Transvaal, notwithstanding what Barratt has written to the contrary.

The last species is the Pink-throated Longclaw (*M. ameliæ*), which has, however, most of the underparts of a pink colour in addition to the throat.

The Longclaws are inhabitants of grassy downlands, where they build a cup-shaped nest of grass lined with finer material and horsehair, placing it in a hollow under a tuft of grass or weed, and laying three or four cream-coloured eggs marked with spots of different shades of brown and purplish.

PIPITS

The genus *Anthus* contains ten species, most of which are sombre brown-plumaged birds.



FIG. 112.—Tawny Pipit, nest and eggs.

The Tree Pipit (*A. trivialis*) is a migrant from Northern and Central Europe and Western Siberia, where it breeds. It was first recorded from the Transvaal by Wahlberg, and

recently by L. E. Taylor as far south as Irene, in the Pretoria district.

The Cinnamon-backed Pipit (*A. pyrrhonotus*), the Lesser Tawny Pipit (*A. rufulus*), the Vaal River Pipit (*A. vaalensis*), are all brown birds of dull coloration, and not easy for the tyro to distinguish from one another. They are called "Koesters" (meaning Duckers) by the Boers, from their habits of ducking down or cowering in the grass. They are denizens of the open veld, making a nest somewhat similar to that of the Longclaws in much the same locality; and usually lay three eggs of a sandy tint mottled with reddish and purplish brown.

Our friend, Mr. L. E. Taylor, of Irene, had the honour of adding a Central African species to the South African list, viz. the Golden Pipit (*Tmetothylacus tenellus* of Cabanis). That this truly Tropical bird, in its gaudy yellow and black attire, should have wandered as far south as the South Central Transvaal, is somewhat strange. The *Journal für Ornithologie* (organ of the German Ornithological Society) for January, 1907, contains a coloured plate of the female (till then undescribed) and wings of both sexes.

SECRETARY BIRD

A prominent though not very common figure on the veld is the Secretary-Bird (*Serpentarius secretarius*). It is a well-known bird in its ashy-grey and black plumage; the black quill-like feathers situated at the back of the head and erectable at will give the bird its name of "Secretary."

This bird was formerly protected under a five-pound fine in the Cape Province, but this has now been removed, we believe, owing probably to a closer knowledge of the economy of the Secretary-Bird.

It requires a considerable run before it can rise on the

wing, and seldom flies either high or far. We on one occasion ran a bird down on horseback with a pack of greyhounds, the bird running with the fleetness of an antelope, with outstretched wings, occasionally rising into the air, but its flight was of short duration, the bird invariably descending and continuing its course on foot, using its wings as propellers. This alternate rising and settling kept on till the bird was too tired to rise, and the dogs eventually brought it to bay against a bank, where it pluckily defended itself with wings and beak. Calling the dogs off, we let the bird go on its way unmolested, having experienced the best run with the hounds we had had that season, and the bird's staying powers having had the effect of putting our horses into a foamy lather from head to foot.

The Secretary usually roosts in a mimosa tree at night, where it also constructs its nest—a large shallow saucer of sticks, lined with a few clods of roots, hair and wool, and measuring from three to five feet in diameter.

The eggs are either plain bluish-white or marked with brownish spots.

It stalks about the veld singly or in pairs, and feeds on snakes, lizards, small tortoises, insects, and young birds, such as young larks, partridges, &c. The last-named diet has earned for it the enmity of the sportsman, and although the evidence of its feeding on young game birds seems conclusive enough, we are not prepared to state to what degree this has developed.

SANDGROUSE

The Sandgrouse (Family Pteroclidæ) are represented in South Africa by four species falling under two genera. They are characterised by a small beak devoid of a cere, and the legs are feathered to the junction with the toes.

There are three species of *Pterocles* which are immediately

distinguishable from the single member of the genus *Pterochlorus* by the tail feathers being rounded, whereas the latter bird has the two centre feathers pointed and projecting beyond the other. They lay two or three eggs on the bare ground, where the protective coloration of the eggs renders them difficult of detection.

The Variegated Sandgrouse (*Pterocles variegatus*), called the Geele Patrijs (Yellow Partridge) by the Afrikanders, can easily be recognised by the small rounded spots of white which adorn the back and breast. Length, $9\frac{1}{2}$ inches.

It is not found South of the Orange River nor West of the Western Transvaal.

The Yellow-throated Sandgrouse (*P. gutturalis*) or Nacht Patrijs (Night Partridge) is without the white spotting characteristic of the first species, but has the under tail-coverts of a plain dark chestnut which renders it easily recognisable from the following species which has the under tail coverts thickly barred with black. Length, 11 inches.

This bird ranges from Little Namaqualand to the Central Transvaal.

The Double-banded Sandgrouse (*P. bicinctus*) has the forehead and a band across the fore part of the head white, divided by a black stripe; and has the additional characteristic above mentioned of the barred tail coverts. Length, 9 inches. It was very common in the Pretoria Bushveld during November and December of 1913, and we have shot it every winter in the same locality.

The Namaqua Sandgrouse (*Pterochlorus namaqua*) needs no further description than the attenuated centre tail feathers. Length, $11\frac{1}{4}$ inches. The Boers call it the Namaqua Patrijs (English, "Namaqua Partridge"). It is commoner and more generally distributed in South Africa than any of the

other species. It is particularly common in the dryer portions of the Cape where the bird's plumage harmonises with the scrub and sand of its karroo home.

The Sandgrouse are partly migratory in habits and live chiefly on weed seeds and grain.

They fly in flocks at sunrise and sunset to the nearest water, when excellent shooting can be obtained by lying up near the water, as the flight is fast, and fine sporting shots are obtainable.

FRANCOLINS

The Francolins (Family Phasianidæ) are locally known as Pheasants and Partridges, and to the Boers as Patrijse.

There are two genera of Francolins :—

- (a) Head, neck and throat covered with feathers . . . *Francolinus*.
- (b) Head and neck feathered, throat bare *Pternistes*.

To the former belong the " Partridges " and to the latter the " Pheasants," numbering thirteen species all told. The members of this family are not easy of concise description, and we must refer the reader for detailed information to the excellent Vol. IV. of the " Birds " in Selater's " Fauna of South Africa," or to C. G. Davies' lovely plates in Major Horsbrugh's book on " South African Gamebirds."

The Francolins—apart from their economic value as food for man—are of great utility to the farmer on account of their seed and insect eating propensities.

They are fond of digging for small bulbs and roots, and from this the idea of the Boer farmer that they are detrimental to potato crops probably originates; they bear in consequence no love for the Francolins, accusing them of stealing mealies, *potatoes*, &c. More than one farmer has told us that he destroys all nests discovered, and all the arguments in defence of our little feathered friends could not bring these self-opinionated old farmers to see the error of their ways.

Mr. Thomsen, Chief Locust Officer of the Transvaal, says they are invaluable in the destruction of locusts, as they not only feed on voetgangers, but scratch up and eat countless locust-eggs.

In the Cape Province the two best known species are the



FIG. 113.—Orange River Francolin chicks hatching out.

Cape Redwing (*F. leucophaea*), and the Grey-wing or Cape Partridge (*F. africanus*). The latter bird, generally known as the Berg Patrijs (Mountain Partridge), is also found north of the Orange River. North of this dividing line the Cape Redwing is replaced by the closely allied Orange River Francolin (*F. gariiepensis*), also known as the Rooivlerk Patrijs. This bird is fairly common along the rocky ridges



FIG. 114.—Cape Redwing Francolin at nest.

in the Orange Free State, and the accompanying photograph was taken at Springfontein, where it is plentiful.

Their noisy call—so exhilarating to the sportsman—may very frequently be heard at sunset amongst the long grass and stunted scrub on the crests of low stone koppjes, its favourite locality at that hour. It may also be found in the open glades of the thick mimosa-bush scrub which fringes the spruits and water-courses, where it adds considerably to the “bag” of a day’s “shoot.” It rises suddenly and flies with great rapidity, consequently shooting it is no easy matter.

It makes its nest in a depression in the ground under a tuft of grass, herbage, or ripening grain-stalks, and lays five to nine eggs of a dark fawn colour spotted with brown.

The second genus (*Pternistes*) contains three species of purely bush-loving birds easily recognised by the bright red bare skin round the eye and on the throat.

The two southern species may be known as the Eastern and Western Cape Rednecked Francolin (*P. nudicollis* and *P. castaneiventer*), ranging as far north as Natal, and differing from the northern form (*P. swainsoni*) by having the feathers of the breast and belly with white centres. The latter bird has the back more vermiculated, and is also smaller. It is very common in the Pretoria bushveld, and forms a fair proportion of the sportsman’s bag.

All three species are found in thick bush, where they sometimes take refuge in a tree when flushed. They nest under a tuft of grass beneath a bush or tree, and lay from six to eight eggs.

CRANES

The members of the Family Gruidæ are true ornaments of the veld, being stately birds, and are represented in the sub-continent by three conspicuous species.

The Wattled Crane (*Bugetanus carunculatus*) is slate-

black on the back, with the wing and tail-feathers black ; top of head dark slate ; cheeks and neck white : entire under surface black. The face is covered with warts from the base of the beak to the eyes, while below the throat there are two pendant lappets, bare in front but feathered on the hinder surface. Length, 56 inches.



FIG. 115.—A pair of Wattled Cranes.

It is not a common bird anywhere, and is generally seen in pairs or small parties on the open veld near marshy localities, or in the neighbourhood of dams or vleis.

It has become scarcer year by year, and latterly the Zoo has only received examples from the Belfast District of the Transvaal.

It feeds on frogs and insects, varied by an occasional meal of grain.

The eggs are pale olive-brown, lightly marked with darker.

The Blue or Stanley Crane (*Anthropoides paradisea*) is a much commoner and better-known species. It is of a pale



FIG. 116.—Blue or Stanley Crane.

blue-grey colour throughout, excepting the crown of the head, which is white, and the apical portion of the secondaries, which are black. Length, 48 inches.

It is confined to South Africa; we found it particularly plentiful on the "flats" of the Orange Free State, in the Brandfort and Winburg districts, and in the Central Transvaal at certain seasons.

It feeds on a variety of substances, including locusts and other insects, small reptiles, and the like.

It congregates into flocks during the winter months, separating into pairs in the breeding season.

It lays two large pale-brown eggs (with sometimes a greenish tinge), spotted and blotched with purplish and dark brown, and measuring generally about $3\frac{1}{2}$ inches in length.

The young, when unfledged, bear quite a singular resemblance to young ostrich chicks. These become very tame in captivity, and may often be seen stalking about the farmyards.

The Crowned Crane (*Balearica regulorum*), known also by the vernacular names of "Kaffir Crane" and "Mahem," is easy of recognition in its slate, white and black plumage, velvety black crown, ornamented by a large crest of pale-yellowish bristles, and the patches of naked red and white skin on the cheeks. Length, about 40 inches.

It ranges from the Cape Province to Rhodesia, and over to the northern portion of South-West Africa,

Like the Blue Crane, the Mahem assembles into flocks during the winter, and pairs off to breed in the summer. It prefers the open veld, but is seldom found far from moist localities, such as vleis or rivers, where it seeks its food consisting of frogs and lizards, locusts and other insects.

Unlike its congener, the Blue Crane, it breeds in a swamp or vlei, constructing its nest of reeds, rushes, &c., just above the surface of the water, and lays two eggs of a bluish-white colour.

BUSTARDS

The Korhaans (Family *Otididae*) are fairly numerous in South Africa, twelve species being found within our limits.

The male of the Black Korhaan (*Otis afra*) has the crown ashy and ear coverts white ; rest of head, neck and underparts black ; wing black with a white band.

This bird is confined to the Cape Province, being replaced north of the Orange River by the White-quilled Korhaan (*O. afroides*), which closely resembles it, but has the primary wing feathers *white* on the *inner* web, only the tips being black ; quills white below, whereas they are black in *O. afra*. The females of both species are without the black and white variegations. The White-quilled species ranges from the north of the Cape Province to the Transvaal. Length of both species about 21 inches.

Both birds are usually found in pairs on the flats, where their harsh croaking call may be heard at almost any time of the day. They are not easily located except when the male protrudes his black head above the level of the grass ; when flushed he flies up with a loud cackle ; they afford good sport and are good eating.

They have now been removed from the list of gamebirds and added to that of the utility birds on account of their insect-eating habits.

The Vaal Korhaan (*O. vigorsii*) is ashy-grey above, shaded with pink and speckled with dark brown ; below paler with a beautiful pink sheen, which is seldom seen in the prepared skin, as it fades after death. Length, 24 inches.

The White-necked Paauw (*Otis ludwighi*) is larger than any of the Korhaans, and is distinguished from the Stanley Paauw (*O. caffra*) by the arrow-shaped markings of yellowish on the back, and by the mottled buff cross bands on the

tail; the latter bird is without the arrow-shaped spots of sandy buff, and has the tail cross-barred with white. The former bird is also smaller, being about 40 inches long to the latter's 43 inches.

In the Brandfort district, Orange Free State, the latter

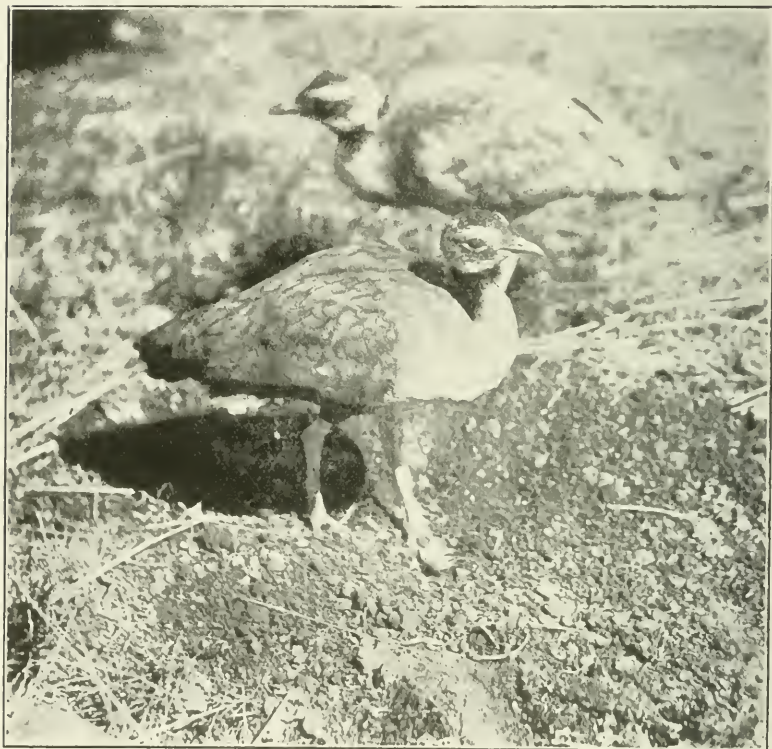


FIG. 117.—Blue breasted Korhaans. (Photo. Horsburgh.)

is fairly common, being found on the flats singly or in parties of three to seven individuals. When disturbed they fly up with a loud croaking call quite unlike that of the Korhaans.

The Black-bellied Korhaan (*Otis melanogaster*) is easily distinguished by the characteristic indicated by its trivial name, viz. the black under-parts. Length, about 21 inches.

It is not common anywhere, ranging from East London to Rhodesia. Mr. Claude Taylor procured it in the Zoutpansberg district, and on the Swaziland border. I shot a couple near Monze, Northern Rhodesia, in November, 1918; they were the only Bustards seen.

The Blue Korhaan (*Otis caerulescens*) is easily recognised by the slatey-blue colour of the back of the head, neck, and under-surface of the body. Length, about $22\frac{1}{2}$ inches.

It is considerably larger than the Black Korhaan, and is delicious eating.

It was not exactly plentiful in the Orange Free State prior to the Act protecting them, but the writer met with it in the neighbourhoods of Bloemfontein, Brandfort, Lindley, Winburg and Kroonstad. It is perhaps commonest in the latter district, where it may be found going about in pairs or parties of three to five individuals. In May, 1918, we found them quite common on the way from Brandfort to Marquard, so that protection has evidently been beneficial.

We found them exceedingly common on the veld near the Aapies River just north of Waterval North in the Pretoria District; they were, however, anything but tame.

Barrow's Korhaan (*Otis borrovii*) can be distinguished from the preceding bird by the patches of tawny on either side of the chest and the white abdomen. Length, 21 inches.

According to Butler, this is the commonest species in Upper Natal.

The last and largest of the Bustards is the stately Gompauw or Kori Bustard (*Otis kori*), which has a total length of nearly 5 feet, and weighs about 30 lbs. It has a black crown with lengthened feathers forming a conspicuous crest: below white, with a band of dark brown across the chest. Length, 58 inches.

This bird derived its Boer name from its supposed fondness for the gum which exudes from the bark of the Mimosa tree.

It is fairly evenly distributed over South Africa, but it is nowhere common.

All the bustards lay two eggs, of some shade of pale brown blotched with darker, on the bare veld in a mere depression in the ground.

They are for the most part insect feeders, varying this by a few berries, a little grain, and weed seeds.

Apart from their economic value as food, they do an immense amount of good by devouring termites and locusts, caterpillars, and other insect pests. They are now strictly protected by law.

DIKKOPS

The Family *Edicnemidæ* is represented in South Africa by two somewhat similar species. The largest of the two, the Bush Dikkop (*Edicnemus capensis*) is pale brownish above mottled with black; breast sandy coloured fading into white on the belly. Legs and feet yellow. Length, 18½ inches; wing, 9 inches.

It inhabits the open thorn scrub, finding its way occasionally on to the flats, but seldom wandering far from the "bush" localities. It may be found in small parties during the winter months, but pairs off in the breeding season.

It feeds chiefly on various insects and seeds. It has a loud plaintive call which may often be heard on bright moonlight nights, a fact which has earned for them the name of Moonbirds in some districts.

Its flesh is excellent eating, and the bird formed at one time no mean item in the sportsman's bag, both in the scrub of the Orange Free State veld and in the plantations along the Rand. It has now been added to the list of utility birds, and is protected by law.

It lays two eggs of a greyish colour spotted and blotched

with dark and light brown, and measuring about 2 inches by $1\frac{1}{2}$ inches ; these are deposited in a mere depression in the ground.

The Water Dikkop (*Æ. vermiculatus*) is slightly smaller



FIG. 118.—Cape Dikkop's eggs.

than the Bush Dikkop, and has the back vermiculated with dusky brown ; the feathers with black shaft streaks. Under-surface much like that of the first-mentioned species. The legs and feet are greenish-slate, which in itself is quite sufficient to distinguish this bird from the other species. Length, $15\frac{1}{2}$ inches ; wing, 8 inches.

The Water Dikkop is fairly common in the neighbourhood of some of the vleis in the Brandfort and Winburg districts of the Orange Free State.

The eggs resemble those of the Bush Dikkop, but are a little smaller.



FIG. 119.—Water Dikkop.

COURSERS

The Coursers are included in the Family Glariolidæ by Mr. Selater, and form a separate Sub-family, the Cursorinæ, the second Sub-family being the Glariolinæ containing the Pratincoles or Locust Birds, which were dealt with in the Second Chapter.

There are five varieties of Coursers in South Africa, birds which are locally called " Draverkies " (*lit. Trotters*).

They have long legs, no hind toe, long pointed wings and a short square tail.

The Rufous Courser (*Cursorius rufus*) is reddish-brown above, back of head slate-blue surrounded by a U-shaped



FIG. 120.—Rufous Courser, with egg.

edging of white which springs from above the eye, and runs between two black lines. Breast similar to the back with a black patch on the lower portion, rest of underparts white. Length, $8\frac{1}{4}$ inches.

This species ranges from the high veld of the Cape throughout South Africa to the Limpopo. It is very common on the flats of the Orange Free State, where it may be found in flocks or small parties, often consorting with the Two-banded Courser. It is exceedingly partial to the burnt stretches of veld, where it feeds on seeds and insects. It is

excessively fond of termites and ants, and it is only necessary to break open an anthheap to trap any number of them, a plan commonly practised by the Barolong boys in the Maroka district. It runs rapidly, rising when disturbed with a guttural cry of "kek-kek, kek-kek."

It lays two eggs, of a pale yellowish-brown thickly spotted and streaked with black and dark brown, in a mere depression in the soil. Eggs may be looked for from the middle of September to November.

The Black-winged Courser (*C. temmincki*) differs from the Rufous Courser in having the whole crown chestnut-rufous (no blue hinder portion) and its darker wings. It is somewhat scarce and a migratory visitant. It is sometimes found consorting with Burchell's Courser. The young of both species are mottled above.

The second genus (*Rhinoptilus*) contains three species, only one of which is comparatively common.

The Two-banded Courser (*R. africanus*) can be readily distinguished from the two previous species by the spotted appearance of the upper surface, and the two black bands across the chest. Length, 9 inches.

It ranges from the Cape Karroo to the Transvaal and South-West Africa. It is much like the Rufous Courser in habits, and, as already stated, they may often be found in one another's company.

We discovered it to be fairly common in the Maroka and Brandfort districts of the Orange Free State. It is never found in such large parties as the Rufous Courser, being usually in pairs or fours.

It lays on the bare ground a single egg, which is pale yellow streaked with yellowish-brown.

Two more species are found in South Africa, but they are uncommon, although one, the Bronzewinged Courser

(*R. chalconotus*), has repeatedly been seen in the Pretoria district of late. In May, 1920, I flushed several small



FIG. 121.—Bronzewing Coursers (Crowned Lapwing on right).

coveys of them from the old lands on the Sand River. Its chief characteristic, the beautiful metallic purplish spots at the end of the flight feathers, is sufficient to distinguish it.

PLOVERS AND LAPWINGS

Only a few members of the Family Charadriidæ can, with justice, be termed “ornaments of the veld,” the greater number being water-loving birds which will be found in another chapter. As they are of undoubted benefit to the farmer, they are now protected by law.

The Blacksmith Plover (*Hoplopterus armatus*) has the fore part of the head, base of neck, sides of body, abdomen, upper and under tail-coverts white; wings grey; rest of plumage black. Length, 12 inches.

It ranges from the Central Cape Province to the Zambesi. It is seldom found far from water, frequenting the neighbourhood of swamps and vleis. In the Orange Free State it is not uncommon near the dams and vleis, where its peculiar metallic call (from which its trivial name is derived) may often be heard during the day or on moonlight nights.

It lays two to four eggs of a pale yellowish colour, thickly speckled with black.

The Blacksmith Plover feeds on worms, insects, snails and similar animal matter, thus being of practical benefit to the farmer.

The Crowned Lapwing (*Stephanibyx coronatus*), called by the Boers the Kivietji, is too well known to require much of a description. Its black head adorned with a white V-shaped mark, long red legs and pale drabish-brown back will serve to distinguish it from the other plovers. Length, 12 inches.

It is distributed throughout South Africa except the Natal littoral. It is an exceedingly common bird on the flats of the Orange Free State, where it usually congregates into flocks of varying number. It afforded good sport when hunted with a dog, circling in the air above the canine, and giving vent to loud plaintive cries, but is now protected by law as an insect eater. Its characteristic call is truly typical of the veld, and is well known to every South African sportsman. It may also often be heard on moonlight nights.

It is a good friend of the farmer, feeding on insects of various kinds and weed seeds. The flesh is palatable.

It lays its eggs—usually three in number and of a yellowish-brown colour blotched with dark and purplish-brown—in a slight hollow on the ground.

The Black-winged Plover (*S. melanopterus*) has the front of the crown white and the hinder portion slate coloured. Length, $10\frac{1}{2}$ inches.

Although fairly widely distributed, it is not a very common bird. Like the Crowned Lapwing and the Coursers, it is very partial to burnt stretches of veld where it usually nests, laying its three or four eggs in a depression in the soil; it



FIG. 122.—Crowned Lapwing at nest.

is very bold in defending its eggs. These may be searched for during the months of August to October, and do not differ very much from those of the Crowned Lapwing.

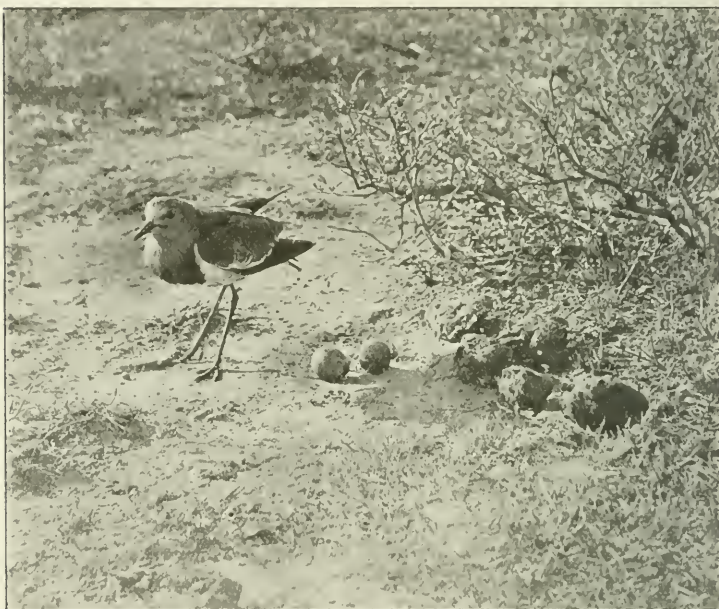


FIG. 123.—Black-winged Plover and eggs.

OSTRICH

The last bird which may be included in this chapter is the well-known and long domesticated ostrich (*Struthio australis*). This enormous member of the Avian race is included in a separate sub-class, the Ratitæ, possessing no keel to the sternum or breast bone. The Ostriches form the Family Struthionidæ, of which the African Continent possesses several species.

In the old “voortrekker” and pioneer days, the Ostrich roamed over the veld in a perfectly wild state, in company with the Gnus and Antelopes, but since about 1870 has been

domesticated and farmed like cattle, its feathers forming a lucrative article of commerce. In some portions of the



FIG. 124.—Female Ostrich on its eggs. (Photo. R. H. Ivy.)

Transvaal, Rhodesia, Bechuanaland and Portuguese East Africa troops of wild birds still exist, and it is to be hoped that steps will be taken to preserve these as much as possible.

In parts of the Transvaal Bushveld, even in the Pretoria District, wild ostriches are still fairly common, and we have seen small flocks, as well as nests full of eggs every year.

It lays large straw-coloured eggs, the shell being pitted with tiny pores. The nest is merely a depression hollowed in the ground.



FIG 125.—Albino Ostrich.

During the year 1904, 470,381 lbs. of feathers valued at £1,058,988 were exported.

Several serious diseases have developed in the Ostrich and its feathers ; these important matters are receiving the close attention of Dr. Duerden, Professor of Zoology, Rhodes University College, Grahamstown, to whose interesting papers in the *Cape Agricultural Journal* and *Proceedings* of the South African Association for Advancement of Science we must direct the reader for full particulars. Dr. Duerden's work is such as to earn the gratitude of all South Africa.



FIG. 126.—Young Ostrich Chicks (to show striping of head).

CHAPTER VII

THE BIRDS OF RIVER AND VLEI

KINGFISHERS

THE Kingfishers form the Family Alcedinidæ, with five genera. They are nearly always found in the neighbourhood of water, and nest in holes tunnelled in banks and lay shiny white eggs.

The Pied Kingfisher (*Ceryle rudis*) is of a general mottled black and white plumage; crown crested; a white collar on the nape of the neck; the underparts white with, in the case of the male bird, two black bands across the chest, the female possessing but one. Length, about $11\frac{1}{2}$ inches.

This bird is found throughout South Africa. We met with it at Port Alfred (exceedingly common), Grahamstown (fairly common), Fort Beaufort district, Modder and Valsch Rivers, O.F.S., Modderfontein, Irene, Crocodile and Aapies River, Pretoria district.

At Port Alfred it is quite common on the beach, where it may even be seen fishing in the sea. It procures its food by hovering over the water and diving headlong, being often completely submerged. Besides fish it feeds on frogs and crustacea.

The Giant Kingfisher (*Ceryle maxima*)—called the Groote Vischvanger by the Dutch—is the largest member of the family in South Africa, with a total length of about 17 inches. It is black and white above, the white taking the form of circular spots; throat and abdomen white, marked

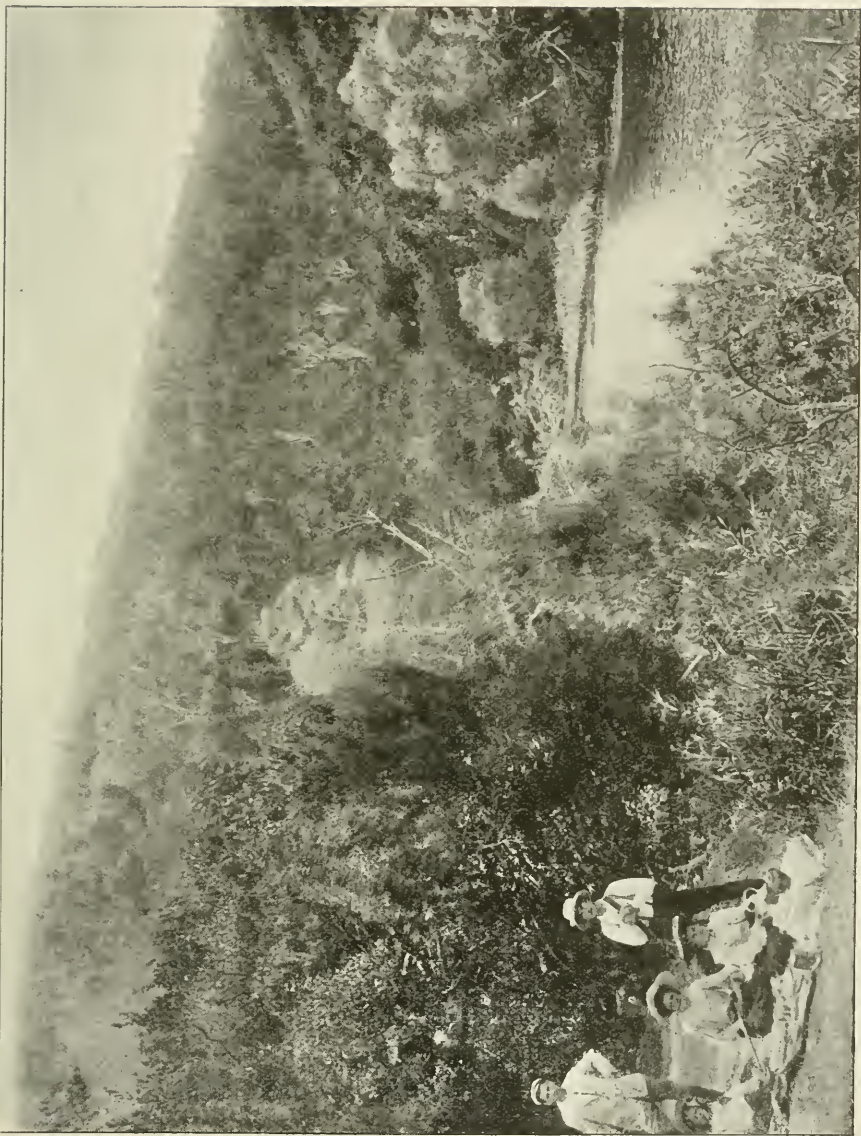


FIG. 127.—Typical Albany Scenery, with euphorbias protruding from amongst the other trees.

with black, lower throat and breast reddish-chestnut or rust colour. The female differs in having the breast white spotted with ashy-grey, the lower breast and abdomen being rufous.



FIG. 128.—Half-collared Kingfisher

Like its smaller congener, it is found along most of the South African rivers, and on the coast at their mouths, but it is not nearly so common.

The Half-collared Kingfisher (*Alcedo semitorquata*), called

the Blaauwe Vischvanger or Blue Kingfisher, is blue above; throat white, and under-surface pale tawny-yellow, except a blue patch on either side of the chest. Length, 7 inches.

It is rather common in the Albany Division and at Port Alfred (Kowie River); we also met with it on the Hennops and Crocodile Rivers in the Pretoria district. It



FIG. 129.—Malachite Kingfisher.

is a shy, quiet bird, seldom met with far from water. It lives principally on small fish.

The beautiful little Malachite Kingfisher (*Corythornis cyanostigma*) is one of the smallest of our river birds, and is a conspicuous figure with its bright blue upper surface,

black-barred chest, reddish-buff underparts and coral-red bill and legs. Length, 6 inches.

It may be seen sitting on a reed or tree, or darting up and down the surface of the water, emitting its shrill cry of "peep peep"; it frequents almost every stream or dam in the country.

We have taken its eggs—from four to six rounded ovals of a shiny white (when unblown and fresh, of a pale salmon-pink owing to the yolk shining through the shell)—from holes in the bank of a donga or furrow near Grahamstown in September to November and at Modderfontein in November.

The Natal Kingfisher (*Ispidina natalensis*) differs from the Malachite Kingfisher in being smaller and in the possession of a rufous-brown collar, and darker underparts. Length, about 5 inches.

It ranges from Port St. John through Natal and Zululand to the Zambesi.

The Brown-hooded Kingfisher (*Halcyon albiventris*) has the top of the head varying from an ashy to a dark brown, streaked with darker; a whitish collar round the neck; back and shoulder patch black; rump regions and tail cobalt-blue; throat white, merging into a pale fulvous on the lower breast, streaked with dark brown. Length, $8\frac{1}{2}$ inches.

This bird ranges from Swellendam eastwards through the Cape Province, and northwards to the Northern Transvaal. It is a noisy, fearless bird, and subsists chiefly on insects of various kinds, millepedes and small fish. The nest-hole is usually very foul-smelling. The eggs are generally four or five in number.



FIG. 130.—Brown-hooded Kingfisher near nest hole.

There is a smaller rather closely allied bird, the Striped Kingfisher (*H. chelicuti*), which need not concern us here.

The Angola Kingfisher (*H. cyanoleucus*), easily recognisable by the upper mandible being red while the lower is black, and the Mangrove Kingfisher (*H. senegaloides*) are scarce birds within our limits.

CORMORANTS

The Cormorants (Family *Phalacrocoracidae*) are essentially sea birds, but two of the species have been recorded as breeding on inland waters.

The White-breasted Duiker (*Phalacrocorax lucidus*) is white on the sides and forepart of the neck, from the throat downwards, extending to the upper breast; rest of under-surface and the most of the upper parts black. The head is adorned with a few lengthened feathers, and the tail contains fourteen rectrices. Length, about 3 feet.

This bird is found all along the South African coast, and inland it has been recorded from Kroonstad by Barratt, Vredefort Road (Hamilton), Rhodesia (Marshall), and, more recently, from the Compies River, near the Swaziland Border, by C. H. Taylor. It breeds on most of the islands off the Cape Coast, and Sparrow found a pair nesting in a willow tree on the shore of a vleï at Bethlehem, Orange Free State, in May.

The eggs are pale blue and of a chalky texture, and may be looked for at almost any season. This Cormorant dives and swims with great facility, and, like all its kind, feeds on fish, mollusca, &c.

The Long-tailed Cormorant (*Phalacrocorax africanus*) is of a general black colour, relieved by a little greyish on the wings and a few white feathers on the sides of the face and neck. The forehead is ornamented by a tuft of upright

black feathers, and the tail consists of twelve feathers. Length, about 2 feet.

It is almost as often met with on inland waters as on the coast, being found on most of the rivers. It swims low in the water, only the top of the back, head and neck being visible. Layard found it breeding in large numbers on the Berg River in September, W. Selater on Dassen Island in July, so that its breeding season appears to be irregular. The eggs are similar to those of the previous species, but are smaller, and the nest is either placed on a rock or in a tree or bush. Like its congeners, it is a swift, strong flyer.

The Snake-bird (*Anhinga rufa*) has the back of the head, neck and upper back dark brown, speckled with dark reddish and black, the lower back, wings and tail black; sides of the head and neck adorned with a white stripe and a black band; lower part of neck and underparts black. It has a straight, slender bill and a long, snake-like neck, which gave to the bird its trivial name. The feet are fully webbed. Length, 31 inches.

It is found along most of the larger rivers, but is nowhere exactly common. It feeds almost exclusively on fish. It is a great diver, and usually swims very low in the water, only the head and long neck being visible. Layard and Dr. Stark found the Darter (as this bird is also called) breeding on the Berg River in the Cape Province, and the latter describes the nest as a bundle of sticks situated in a willow-tree. The clutch varies from three to five and the eggs are elongated and shiny-white, with the Cormorant-like underlying bluish layer.

PELICANS

The Eastern White Pelican (*Pelecanus roseus*) is of a general white colour, tinged with rose-pink, a shoulder

patch and the wing quills black ; a patch of pale yellow on the breast. The head is ornamented with a small crest of narrow feathers, and the bill is flat, with a large patch of naked skin below it. Length, about $5\frac{1}{2}$ feet. Tail of 22 or 24 feathers.

Besides being found on the sea-coast, this bird was met with by Andersson on Lake Ngami, by Alexander on the Zambesi, and by Bryden on the Botletli River ; it has also been recorded from one or two other inland localities. There is another smaller species with a tail of 20 feathers (*Pelicanus rufescens*), whose portrait we append.



FIG. 131.—Pink-backed Pelican.

Andersson found this bird breeding near Lake Ngami. The eggs are elongated white ovals. Pelicans subsist on fish, the pouch below the beak being used as a bag for carrying their food.

HERONS AND EGRETS

The true Herons (Family *Ardeidae*) are represented in South Africa by four species, the first of which is the huge Goliath Heron (*Ardea goliath*), with a length of over four feet. Upper parts slate colour except the top of the head and neck, which are ruddy-brown. Below, chin and throat white, a black line down the front of the lower half of the neck; lower feathers lengthened to form a sort of "apron"; rest of under-surface maroon. Length, 53 inches.

It is evenly distributed over the sub-continent, being inland perhaps commonest at Potchefstroom. There is a fine mounted example with nest and three eggs in the Pretoria Museum, obtained by C. B. Horsbrugh on the Modder River, Orange Free State. The nest is usually a platform of sticks, reeds, and sedge, placed on the weeds in a marsh of vlei, or in the branches of a tree overhanging water. The eggs are clear pale blue, and oval in shape. The Goliath Heron is found singly or in pairs, usually at the mouths of rivers. It feeds largely on fish.

The Grey Heron (*Ardea cinerea*) is pearly-slate above and along the sides of the body; top of head, neck, centre of breast and belly white; lower front of neck with black patches; on either side of the breast a series of pendent purplish-black feathers. Length, 40 to 41 inches.

This bird is found over almost the whole of the Old World, and throughout the African Continent. Like all the Herons, it is found singly or in pairs, and may be seen standing on the bank of a dam or stream sunning itself or watching for fish and frogs. It also feeds on reptiles and insects. It nests in much the same localities as the Goliath, and the eggs are pale blue. Roberts found fresh eggs in September.

The Black-headed Heron (*Ardea melanocephala*) has the top of the head (which is crested), ear coverts, back of neck,

tail and wings black ; above blackish-slate ; below slate-grey with the lower part of the neck clothed with lengthened plumes. Length, 38 inches. This species ranges all over the sub-continent, and resembles the others in habits.

The Purple Heron (*Ardea purpurea*) has the crown black ornamented by two long plumes ; above slatey ; lower breast dark maroon, darkening towards the abdomen ; lower neck and upper breast pale rufous. Length, 35 to 36 inches.

It ranges from Central Europe to the Cape. In habits and nidification it resembles the other members of the genus.

There are three species of true Egret in South Africa, all pure white in colour.

The Great White Egret (*Herodias alba*) is the largest, with a wing measurement of 14 inches ; the head is only slightly crested. Length, 38 inches.

The two smaller species (wing 12 inches) are the Yellow-billed Egret (*H. brachyrhynchos*), characterised by its yellow bill and slightly crested head, and the Little Egret (*H. garzetta*), which has the bill black, and a pair of long plumes on the nape.

The Egrets are fond of marshy localities and feed on fish, frogs, and the like.

The Great Egret does not breed in South Africa, being a migrant from Europe and Asia. The other two species are fairly evenly distributed over the country, breeding here, but are only common in certain localities.

The Cattle Egret (*Bubuleus ibis*) is white throughout, excepting the decomposed plumes of the head, neck, and centre of back, which are buffish-pink. Length, 21 inches.

It is not uncommon in many localities, except in the west of the Cape Province, whence it has only once been recorded. We found it fairly common along the Aapies

River near Waterval North in the Pretoria District, where it roosted nightly in flocks on the drooping branches of some trees growing on the bank ; at sunset the birds could be seen flying in long lines from the veld, where they had been freeing the cattle of their ticks (often the birds' main article of food).

Harold Fry discovered this Egret nesting on the Vaal River, near Parys, Orange Free State, in November, and Roberts, near Balmoral, in December. The eggs are pale blue in colour.

The Green-Backed Heron (*Butorides atricapilla*) has the top of the head, back and tail glossy dark green ; below ashy grey except for a streak of rufous down the centre of the breast ; chin, centre of throat and front of neck white. Length, about 16 inches.

It is found in the east of the Cape Province, the lower-lying portions of Natal, ranging northwards. There was a pair of these pretty little Herons in the National Zoological Gardens caught when in immature plumage at Six-mile Spruit, near Pretoria.

The Night Heron (*Nycticorax nycticorax*) has the crown and back greenish-black ; neck and the best part of the wing dove-grey ; rest of plumage snowy white, including two long plumes springing from the back of the head. Length, 22 inches.

It is widely distributed throughout South Africa. We found it common on the Valsch River at Kroonstad in April, 1906 ; there was quite a large proportion in the immature grey dress.

It is somewhat nocturnal in habits, spending the greater part of the day amongst the thick trees and reed beds bordering the river. The nest is a saucer-like platform of sticks, and the eggs are pale greeny-blue.

The White-backed Heron (*N. leuconotus*) has a white patch on the back and the neck is bright chestnut. Selater gives only three known records of its occurrence in South Africa: Bathurst by Atherstone, near Durban by Barber and Hex River, Rustenburg by Lucas. To this we can add Port St. John, Pondoland. C. G. Davies, C.M.R., favoured us with the loan of a water-colour painting made by him of a specimen procured at that place. Fitzsimons of the Port Elizabeth Museum has recently informed us of the receipt, in August, of a fine example from Hankey, a village not far from Uitenhage, and we have obtained a pair from the Hennop's River, near Pretoria.

BITTERNS

The Bitterns (genus *Ardetta*) number three species, of skulking habits, inhabiting thick reed-beds and rushes, which are in consequence but little known, and are seldom seen by the ordinary individual. They are somewhat Heron-like in appearance, but are smaller.

IBISES

The Sacred Ibis (*Ibis aethiopica*) is pure white excepting the head and neck, which are black and devoid of feathers; the wings are steel-green and metallic purple. Length, about 3 feet.

This bird ranges throughout the African Continent, being found on most of the inland waters in South Africa, many resorting to the coast islands to breed in spring.

Its food consists of crabs, mollusca, worms, &c. It constructs a platform of rushes or seaweeds amongst the rocks. Roberts found a colony of these birds breeding on a "pan" near Balmoral Station in the Transvaal on December 11, 1904. The nests were built on the rushes about 6 inches above the surface of the water, and contained each from two

to three eggs—these were of a dirty white colour, some marked with light brown round the obtuse ends, but the majority were hardly marked at all. Besides eggs, young in all stages of growth were found.

The Hadadah Ibis (*Theristicus hagedash*) is olive-green



FIG. 132.—Hadadah Ibis on nest.

above, the wing coverts being metallic; the wing quills and tail dark purplish-blue; head, neck and under-surface ash-grey. Length, 30 to 31 inches.

This bird is not uncommon in certain localities. We found it breeding near Grahamstown; the nest—a saucer-shaped structure of stout sticks lined with moss and grass—is built on the lower branches of a tree, generally over-



FIG. 133.—Nest and eggs of Hadadah Ibis.

hanging water: the eggs number three and vary from a creamy tint to greenish-buff and creamy-brown, marked with liver-brown blotches and streaks. One nest discovered in the Albany Divn. was situated in a tree quite 40 feet from the bottom of the kloof. During the winter the Hadadah Ibis congregates into flocks. F. Thomsen of the



FIG. 134.—Wood Ibis.

Transvaal Agriculture Department reports having seen them in large flocks—as many as several hundreds together—devouring voetgangers (immature locusts). They feed on other insects as well, and are thus of considerable economic value to the agriculturist and should certainly be protected, although considered excellent eating by many people.

The Bald Ibis (*Geronticus calvus*) is of a dark metallic green colour, with the head bald, red in colour, and the bill long and red. Length, about 31 inches. It is a rare bird in South Africa, and is sometimes known to the Boers as the Wilde Kalkoen (Wild Turkey).

The Wood Ibis (*Pseudotantalus ibis*) is of a white colour above, suffused with rose-pink, especially on the wings, where the wing-coverts are in addition barred with crimson-lake. The wing quills, feathers and tail are black with a metallic green sheen. The crown and sides of the face and throat are naked, and are of a red colour, edged with yellow. Neck and underparts white; bill yellow; feet brick-red with the toes black. Length 43 to 47 inches.

Young birds are brown above. This is a tropical African species, occasionally ranging southwards, it being rare south of the Zambesi River. The Zoo contained an example collected near Pretoria, a portrait of which I append.

It is found along river-banks, where it searches for its food on the edge of the water or in the shallows.

FLAMINGOES

There are two species of this specialised type of bird in South Africa, recognised by their long legs and necks and the remarkably shaped bill, which is abruptly bent downwards about the middle of its length; plumage white, washed with roseate pink, the wings being black and crimson.

The Greater Flamingo (*Phœnicopterus roseus*) is easily distinguishable from the Lesser bird (*Ph. minor*) by the difference in size, the former having a length of 55 inches against one of 39 inches in the case of the latter species.

They are fairly common along the coasts and on many of the inland waters. Dr. Symonds records the greater Flamingo from Kroonstad district, and we have seen it

in flocks on some of the vleis between Brandfort and Bultfontein, Orange Free State. It is reported by several observers as breeding in South Africa.



FIG. 135.—Greater Flamingoes.

It breeds regularly in the South of Spain. Little is known in South Africa of the smaller species.

The African Spoonbill (*Platalea alba*) is white, with a red crown. Length, 35 inches. Bill long, flattened, and spoon-shaped. It is not common.

GEESE AND DUCKS

The Ducks, Geese and Swans form the order *Anseres*, whereof South Africa possesses but a single sub-family (*Anatinæ*) containing eleven genera with eighteen species.

The Spur-winged Goose (*Plectropterus gambensis*), known to the Boers as the Wilde Makaauw (wild Muscovy), is glossy black with metallic reflections, the sides of the head, throat, and lower neck, breast, belly, and edge of wing

white; the wing armed with a sharp spur; bare skin on the top of the head, with the knob and bill red. Length, about 3 feet.

This species has been but seldom recorded from the Cape, but is quite common on the vleis of the Orange Free State, often consorting in flocks with ducks and other waterfowl, the vleis being literally covered with aquatic birds at certain seasons.

It may be seen in captivity on some farms, in a semi-domesticated condition, having been reared from the egg. It takes a lot of shot, being exceedingly tough in the adult stage. The eggs are shiny white and nearly 3 inches in length. The Southern bird has been separated by Selater under the name of *P. niger*, and is darker in coloration and smaller in size: it has much less white on the face and wings.

The Dwarf Goose (*Nettapus auritus*) is, as its trivial name indicates, a very diminutive member of the goose tribe. It is dark metallic-green, brown, black and white in coloration and is quite a neat, handsome little bird. Length, only 1 foot.

It is met with along the coast and on some of the larger rivers, and we procured it at Port Elizabeth.

The Egyptian Goose (*Chenalopex ægyptiacus*), better known



FIG. 136.—Egyptian Geese (enlarged to show detail).

in South Africa as the Berg Gans (Mountain Goose), is a pretty graceful bird; it is black above, except the crown,

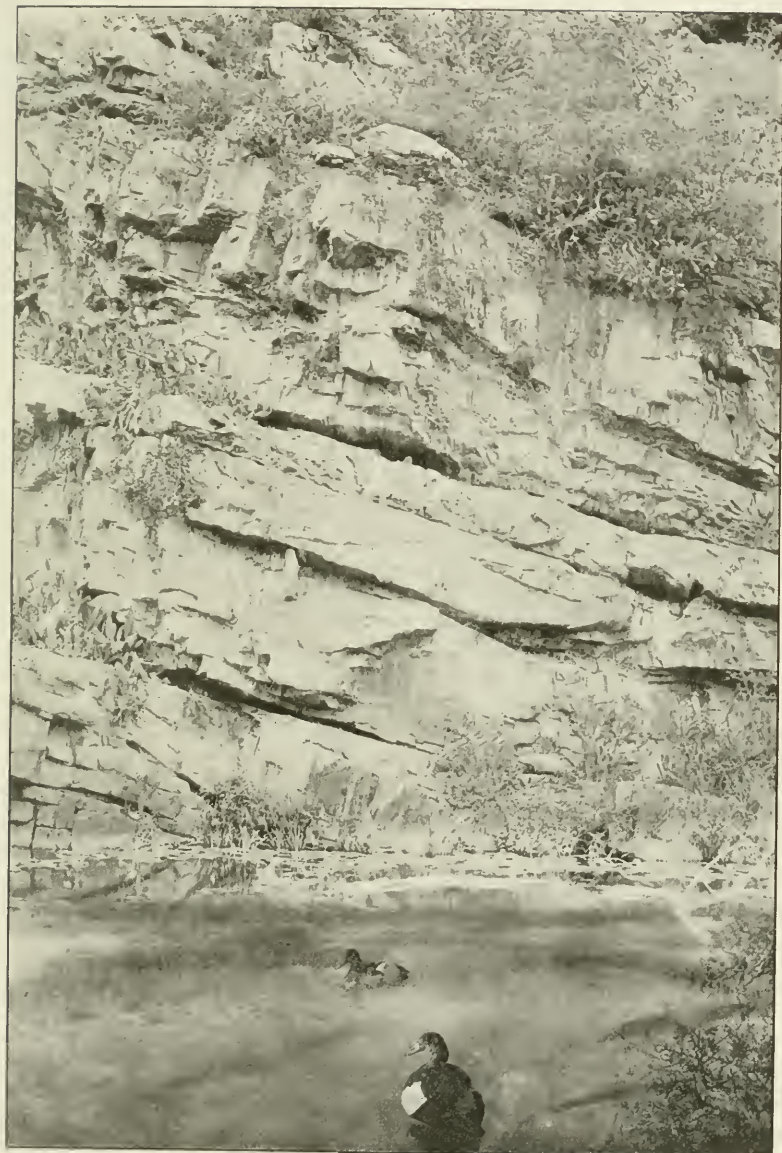


FIG. 137 —A pair of Egyptian Geese.

which is white ; nape and neck greyish fawn, with a narrow pale chestnut collar; the wings are ashy brown; below greyish-white and pale chestnut, the sides of the body and lower neck being grey mottled with fine bands of black. The ring round the eye and round patch on the breast—both bright chestnut—will serve to easily distinguish this bird from any of its kind. Length, 28 inches.

It ranges through the whole of South Africa, being common on the vleis of the Orange Free State at certain seasons, where it breeds amongst the rushes, laying pure white eggs, five to eight in a clutch. This bird has been recorded as breeding on a cliff, and even amongst the grass and rocks of a kopje on the veld. In the photograph (Fig. 137) the geese have commandeered the disused nest of a Hammer-head ; the nest can be seen on a ledge of the cliff near the top of the picture (left centre), the entrance-hole projecting downwards. The bird in the foreground has the wing outspread, showing the conspicuous white patch.

We have kept this goose repeatedly in captivity, but it is pugnacious in the poultry yard, pursuing and persecuting ducks and fowls alike. Its harsh barking quack (so aptly described by Andersson) is irritating in the extreme, except when heard in the wilds.

The Yellow-billed Duck (*Anas undulata*), known to the Boer farmers as the “geelbek,” is perhaps the commonest and most widely spread of the South African Ducks. General colour ashy-brown, mottled with white; a speculum of metallic blue or green on the wing margined by black. Bill yellow with a black central streak on the culmen. Length, nearly 2 feet.

This bird was fairly plentiful on the Modderfontein dams during August, 1907. It is perhaps the commonest duck in most parts of South Africa.

The Black Duck (*Anas sparsa*) is almost black in colour,



FIG. 138.—Black Duck.



FIG. 139.—Nest and eggs of Black Duck. (Photo. L. E. Taylor.)

speckled with grey on the head and neck; the metallic speculum is surrounded by a black band, which is bordered in front and behind by a white stripe. Length, 2 feet.

Mr. Taylor found this bird breeding under a tuft of rushes on a little island at Irene (dist. Pretoria) in July, 1905; the nest contained eleven eggs.

The Cape Widgeon (*Anas capensis*) is often confused with the Red-billed Teal, but can be distinguished by its green speculum.

The Red-billed Teal (*Anas erythrorhyncha*) is called the Smee-eendje. It is brown above, the feathers of the back being edged with pale salmon-pink; below white, nearly every feather with a half-round spot of ashy-black near the tip; bill pink with a brown stripe down the centre of the mandible. Length, 18 to 19 inches.

It nests amongst the reeds and rushes on the bank of a river or vlei, or even on the weeds growing in the water. The eggs have been described as greenish-white, and also creamy-brown. As we have never been fortunate enough to take the eggs ourselves, we cannot say which is correct.

The European shoveller has been recorded from South Africa by W. G. Fairbridge, of Cape Town.

The Cape Shoveller (*Spatula capensis*) is a scarce bird. In addition to the localities given in Stark and Sclater "Birds of South Africa," a male in beautiful plumage was procured by me at Modderfontein, Transvaal, and is now in the Transvaal Museum.

The South African Pochard (*Nyroca capensis*) is of a dark brown colour, the male having the centre of the back and upper wing feathers finely speckled with whitish; a white band on the wing. The female is paler, is without the

freckling, and has the lower surface mottled with white and brown. Length, 20 inches.

It is fairly generally distributed over South Africa. It arrives at Modderfontein in August, leaving again in April. The eggs are pale creamy-white.

The White-backed Duck (*Thalassornis leuconotus*) is widely spread throughout the sub-continent. The top of the head and the throat are black ; above and below of a yellowish-brown colour mottled and barred with black : centre of



FIG. 140.—Nest and eggs of White-backed Duck. (Photo. Haagner.)

back pure white. Bill, short and stumpy, and of a blue and slate colour. Length, 17 inches.

Within our limits it is widely distributed, but remains so far unrecorded from Rhodesia. It is an expert diver, and seldom flies, although it can and *does* fly when persecuted. It rests in the water, amongst the weeds, with the whole body submerged, only the top of the head as far as the eyes and the bill being exposed, which is all the mark usually available to aim at. They are not bad eating at times, although somewhat oily. The nest is a saucer of sedge, rushes and weeds, built on the beaten-down weeds growing in the water, and is usually well concealed.

The nest, of which we append a photograph, was situated on weeds growing in about three feet of water in a dam, twenty yards or so from the shore, and contained six eggs, varying from a greenish creamy-brown colour to a warm pale brown. The addled eggs had a slightly greenish tinge, and were somewhat blotched, probably owing to the action of the mud and water. The nest was lined with a few of the feathers of the ducks themselves.

The Knobbill Duck (*Sarkidiornis melanota*) is black above with coppery and green reflections ; white below, and the



FIG. 141.—Knob-bill Ducks.

head mottled. The male has a wattle-like “comb” on the upper mandible, which becomes very large during the breeding season. There are also yellow feathers on the sides of the lower abdomen. Length 30 inches. Female smaller and without the knob on the beak. This Duck—also known as the comb duck—is found in India, Madagascar, and tropical South Africa, and although nowhere exactly common, ranges as far south as the Orange River. We found it breeding in some numbers on the pools of the Crocodile River, Pretoria District, in May and June, 1916, and several young ones were collected. The ducklings are striped like those of other

ducks and then become dark greyish-brown before donning full adult attire.

We also found the White-faced Duck (*Dendrocygna viduata*) breeding in the same spot and procured a number of young ones. Both these occurrences are new records for the Pretoria District—or more properly the Transvaal. This is an extremely pretty duck, the back being maroon colour banded with brownish; the front half of the head and neck white, rear half black, lower back and centre of lower parts black: sides of body and flanks banded black and white. Length 18 inches. It has a wide range, including South America, tropical Africa and Madagascar. It is rare in South Africa. It has a clear whistling cry.

All the ducks seem to be very irregular in their breeding habits, so far as season is concerned, and the probable explanation of it is that they are double-brooded. Take the White-backed Duck as an example: A. D. Millar found nests in November, December and February, while the clutch photographed was found on April 21, 1899.

RAILS AND CRAKES

The Rails and Crakes are birds of retiring habits, haunting the reed-beds and thickets in marshy localities, and are consequently but seldom seen and little known.

The Kaffir Rail (*Rallus caerulescens*) is dark brown above, merging into slatey-blackish on the crown: throat white; rest of under-surface slatey-blue, merging into black on the abdomen, thighs and flanks, these being barred with white. Length, 10½ inches. Bill and feet bright red.

There are two true Crakes in South Africa, the European species (*Crex pratensis*) and the African (*C. egregia*). Above brownish with blackish centres to the feathers: below brownish in the former and slatey in the latter on the breast,

and the lower portions rufous banded with white in *pratensis*, while *egregia* has transverse bands of black and white. The European bird measures $9\frac{3}{4}$ inches to the South African bird's $7\frac{1}{2}$ inches.

There are two species of spotted Crakes (*Ortygometra*), for which we must refer the reader to larger books.

The best known Crake in South Africa, perhaps, is the little Black Crake (*Limnocorax niger*), with red legs and a greenish bill to relieve the general black of its plumage. Length, $7\frac{3}{4}$ inches. It is fairly well distributed over the sub-continent.

WATER-FOWL

The Moorhen (*Gallinula chloropus*)—the Rooi-bles Hoender or Rooi-bles Riet Haan—is black in colour, fading into a slatey shade on the under-surface. Frontal shield red. Basal portion of bill red, remainder greenish-yellow.

This is widely spread species, being also found in Europe and Asia. Length, 13 inches.

The Lesser Moorhen (*Gallinula angulata*) is considerably smaller than the preceding species, being only $9\frac{1}{2}$ inches in length : it has no red on the lower mandible.

The King Reed-Hen (*Porphyrio porphyrio*) is olive-green above ; back of the head, breast and belly purple-blue ; face, throat and upper breast blue. Frontal shield red. Length, 18 inches.

This handsome bird is a denizen of thick reed-beds and arum-patches, where it lies concealed the best part of the day, searching for its food, which consists of shoots of plants, seeds, worms, &c., in the mornings and evenings. It breeds amongst the reeds, usually placing its nest on a platform of reed-stems, and laying from four to eight eggs



FIG. 142.—King Reed-hen or Purple Gallinule (From a mounted specimen.,

of a pale brown spotted and blotched with purplish and reddish-brown.

The Red-knobbed Coot or Bles Hoender (*Fulica cristata*) is of a general dark ash-brown or sooty colour throughout, darker (almost black) on the head and neck, and paler (greyish) on the abdomen. Bill and facial shield pale blue, the knobs of the shield being dark red. Length, 16 to 17 inches.

It is widely spread throughout South Africa, wherever suitable localities occur. It may be found on vleis, rivers and dams, in companies of varying number. On the vleis of the Orange Free State, it is sometimes so numerous, consorting with wild duck, spur-wing geese, and other water-fowl, that the surface of the water is literally black with the birds! It flies well and is an expert diver. It feeds in the morning and towards sunset, on insects, weed seeds and plant shoots. It has two curious calls, the one a trumpet-like grunt, and the other a shrill vibrating whistle.

Contrary to Bryden's experience, we found this bird anything but good eating, the flesh usually being of a muddy and fishy flavour. However, if young, and if the skin is removed before cooking, it is fairly palatable.

It builds its nest amongst the rushes and reeds; this is merely a platform of aquatic plants resting on the water. The eggs are three to seven in number, and of a pale tawny colour spotted with blackish-brown. We found it breeding in some number on the Florida Lake, near Johannesburg, during August.

PLOVERS AND LAPWINGS

The little Three-banded Plover (*Charadrius tricollaris*) is called the Strand-looper (Shore-runner) in most parts of the country, and is found almost everywhere within our limits.

It is brown above with a white ring round the top of the head ; below white, with two black bands crossing the chest. Length, $6\frac{1}{2}$ inches.

It may be seen on the flats alongside roads, or running along the shore of a vlei or river. Its call is a sharp squeak,



FIG. 143.—Three-collared Plover and egg.

emitted usually as the bird rises from the ground. We took its eggs during the months of October and November at Modderfontein. They are deposited in a slight hollow amongst the mud-clots or shingle, where the protective coloration of the eggs renders them difficult of detection. These are pale yellowish thickly streaked and blotched with

yellowish and dark brown, and are very large for the size of the bird. The young nestlings when first fledged are of a rufous tinge banded with black.

The Sand Plover (*C. varius*) is of a dark brown colour above, the feathers having paler edges and tips ; forehead white and the top of the head brown, the two divided by a black band. A broad band of white runs from above the eye round the back of the head, enclosing the crown, and below this a black band. Under-surface white, the breast being tinged with pale reddish-brown. Length, $6\frac{1}{2}$ inches.

This bird often congregates into small flocks, and may be found on the veld—sometimes far from water—but generally in the neighbourhood of vleis and rivers. It is also found along the coast.

The Curlew (*Numenius arquatus*) is pale brown above streaked with darker ; below white, sides of the face, neck and breast with shaft-streaks of brown. Bill long and gently curved. Length, about 2 feet.

This bird is a migrant from Europe and Asia, and does not breed in South Africa.

The Redshank, Greenshank, Marsh Sandpiper, and Wood Sandpiper, and several other species, are all migrants to southern latitudes, spending the winter months of the northern hemisphere with us, and departing when our winter sets in. They require descriptions too long for this book, and if procured can easily be sent to the nearest museum for identification.

SNIPE

The Double Snipe (*Gallinago major*) is of a mottled black and buffish colour above ; *four* outer tail-feathers on either side white ; below, neck and breast buffish streaked with

brown, chin and centre of abdomen white. Length, 11 inches. Bill straight.

Its congener, the Ethiopian Snipe (*G. nigripennis*), differs in being darker, and the *three* outer tail-feathers are white barred with dusky on the outer web.

Neither of these birds are exactly common except in certain few localities, and only the latter breeds within our limits.

The Painted Snipe (*Rostratula bengalensis*) is the most richly-coloured species of all, and in this case—contrary to the usual course—the female is more brightly tinted than the male, having the back and shoulders of a bronzy-brown glossed with metallic-green, and the neck chestnut. Length, $9\frac{3}{4}$ to 10 inches.

This bird is widely distributed, ranging from India, China and Japan, through Egypt to South Africa. It was found breeding by Andersson in Damaraland, and by Lawrence at Lady Grey, Cape Province.

GREBE

There are three species of Grebe (Family *Podicipedidae*) in South Africa, differing from one another considerably in size. They are usually known as “Divers.”

The Great-Crested Grebe (*Colymbus cristatus*) is easily recognisable by its large size (length, 20 inches), a double crest resembling the “ears” of an owl, and a thick ruff of chestnut and black feathers on the upper neck.

It is fairly abundant and generally distributed in the sub-continent, inhabiting vleis, dams and similar localities. Like the other members of the family, it is an expert diver, often travelling a hundred yards or so under water. It also has the habit of often swimming deep in the water, only the centre of the back, head and neck being visible.

It feeds on molluscs, small fish, and crustacea—also on aquatic plants. The nests are built on the matted weeds growing in the water and reaching only to the surface, where the nest practically floats. Eggs, three in number, and of a greenish tinge when fresh, but they become brownish when they have been in the nest for some time.

The Eared Grebe (*Colymbus nigricollis*) differs from the Great Grebe in having the whole neck ashy-black (the lower neck of the latter bird being silvery white), by the bunch of hair-like bristles behind each eye, and by its smaller size. Length, $12\frac{1}{2}$ inches.

It is not a common bird within our limits, but was found breeding on Vogel Vlei about fifty miles from Cape Town by Layard.

The Cape Dabchick (*Colymbus capensis*) is the smallest of the three, being only $10\frac{1}{2}$ inches in length, and has neither a crest nor a ruff.

It is common and general in distribution. It is a wonderful diver, and is an active little bird in its proper element, viz. water; but is unable to walk on land, having to drag itself along by the aid of its wings. It was found breeding in large numbers at Ondonga (South-West Africa), by Anderson; we took eggs near Grahamstown. These were of a dirty cream colour, and of a pyriform-ovate shape.

CHAPTER VIII

BIRDS OF THE SEA AND COAST

ORDER STEGANOPODES

THE Cormorants are represented in South Africa by four species, two of which we have already treated of under the chapter "Birds of River and Vlei," viz. the White-breasted Cormorant and the Reed Cormorant.

There still remains the Cape Cormorant or Trek Duiker (as it is known amongst the Cape Dutch) and the Bank Duiker or Speckle-necked Cormorant. The former (*Phalacrocorax capensis*) is black, with a slight purplish sheen, the front of the neck and chest being of a dark brown. Naked skin round the eye, and the throat yellow. Tail feathers, 14 in number. Length, 25 inches. It is found on the coast belt from Durban round the Cape to Walfish Bay, and further north.

It breeds on the islands off the South African Coast, such as Jutten and Dassen Islands, and their droppings form part of the valuable deposits of guano, which is annually collected by the Government, after the birds have finished breeding. This species builds a flat nest of sticks and grass on the ground, and lays from two to five eggs of a pale blue colour, covered with a chalky white substance. It lives upon fish and shellfish, and swims and dives with great ease.

The Speckle-necked Cormorant (*Phalacrocorax neglectus*) is of much the same coloration as the Cape Cormorant, but

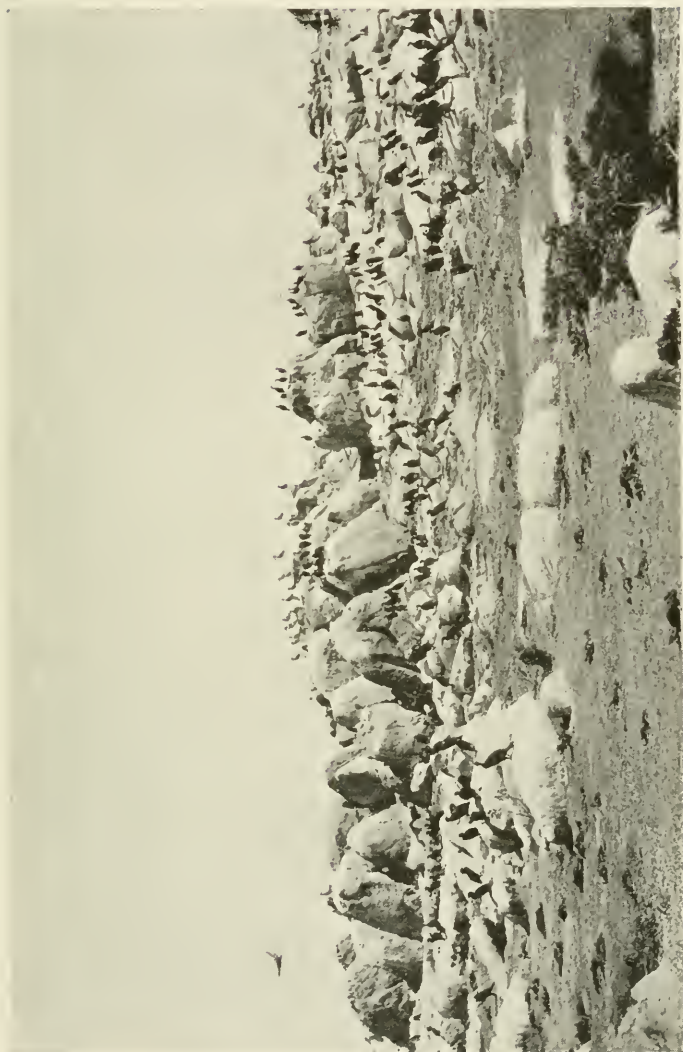


FIG. 144.—Cape Cormorants, with sacred Ibis in the background.
(From M. J. Nicoll's "Three Voyages of a Naturalist.")

has the neck of a speckly nature, is larger (length, 27 to 30 inches), and has only twelve tail feathers. It is much scarcer than the above species, but like it, breeds on the Guano Islands off the South African coast. The eggs resemble those of the Trek Duiker, but the nest is different, being composed of seaweed.

Of the Gannets (*Family Sulidae*) the Cape Gannet or Malagas (*Sula capensis*) is also well known on the coast. It is a white bird with the tail and portion of the wings dark brown. The naked skin round the eye, and about six inches down the throat, is black. Length, about three feet. The young bird is dark brown, speckled with white. It breeds on the Guano Islands off the coast already mentioned, and together with the Cape Cormorant supplies most of the guano collected annually. It lays a single egg in a hollow in the ground or in a depression scratched in the layer of manure.

ORDER LIMICOLÆ

Many of the Plovers and Sandpipers are found along the coast, as well as on the inland rivers and lakes. Some of them have already been dealt with. Suffice it for us now to refer to a few of the commoner littoral species.

The White-fronted Sand Plover (*Charadrius marginatus*) is of a pale ashy-grey colour above, and white below. In the breeding plumage it has a black band across the forehead, and a buffy tinge on the breast. Length, 6½ inches. It is essentially a shore bird, and is a common resident. Like the Three-collared Sand Plover, it lays two blotched and marbled eggs in a depression in the mud or sand.

The Black Oyster Catcher (*Hæmatopus moquini*) is quite black with a red bill and legs. Length, 21 inches. It is

also a coast bird, feeding upon small fish, crabs, etc. It lays from one to four eggs in a mere depression in the sand.

The Sandpipers, etc., are a large group, the individuals of which require descriptions too long for a work of this nature, and the student or reader must therefore refer to the more extensive monographs or text-books.

ORDER GAVIÆ

The Southern Blackbacked Gull (*Larus dominicanus*) is white, with the exception of the mantle and wings, which are blackish. Bill yellow with a reddish tip to the lower mandible. Length, 24 inches ; wing, 17 inches.

It is common all along the coast, and lives upon the garbage thrown overboard from the ships, insects, shellfish, and it even feeds upon the dead bodies of seals and whales. Its eggs may be looked for during the months of November and December. They are deposited on the sand of the sea-shore, and are usually three in number, and of a brownish-green colour spotted with pale and dark brown.

There are two species of gull which resemble one another somewhat, the Grey-headed Gull (*Larus cirrhocephalus*) and Hartland's Gull (*Larus hartlaubi*). The latter is distinguished from the former by its white head and neck, while these regions, as its vernacular names indicates, in the former species, are grey. These two species are of much the same size, measuring 15 to 16 inches in length, and both species have red legs and a red beak. The grey-headed gull is, however, a more inland species than the others, being found in colonies on many of the inland waters.

The various species of Terns resemble one another so closely that only the commonest need concern us here.

The Common Tern (*Sterna fluviatilis*) is white below



FIG 145.—Jackass Penguin on nest. (Photo. M. J. Nicoll.)

and pearl-grey above, the top of the head being black. Bill and legs red. Length, 12 to 13 inches. It is very plentiful in Table, False and Algoa Bays.

ORDER TUBINARES

The Cape Hen (*Majaqueus æquinoctialis*), rejoicing in the inelegant name of Stinkpot amongst the sailors, is very common along the coast, but is seldom seen near to the shore. It is of a sooty black colour with a white patch under the chin. Length, 21 inches.

The Giant Petrel (*Ossifraga giganteus*), better known to sailors as the Mutton Bird, is a large plain-coloured brown bird with a pale green bill. It measures about three feet in length. I have seen it in Table Bay and at Port Elizabeth.

The Cape Petrel (*Daption capensis*) or Cape Pigeon, as it is usually misnamed, is of a white colour with a slatey-black head and neck, and the upper side is spotted with slate-coloured markings. Length, 14 inches. This is a common bird in the Cape seas during the winter and early spring months (April to October).

The Mollymawk (*Diomedea melanophrys*) has the middle portion of the back, the wings and tail, slate-black. The rest of the plumage is white. Length, 32 inches. This albatross is common in Algoa Bay and Table Bay.

ORDER IMPENNES

The Common or Jackass Penguin (*Spheniscus demersus*) is perhaps one of the weirdest of living birds. Like the ostrich it is utterly devoid of flight, but its wings are still more degenerate, being modified to form mere paddles. It

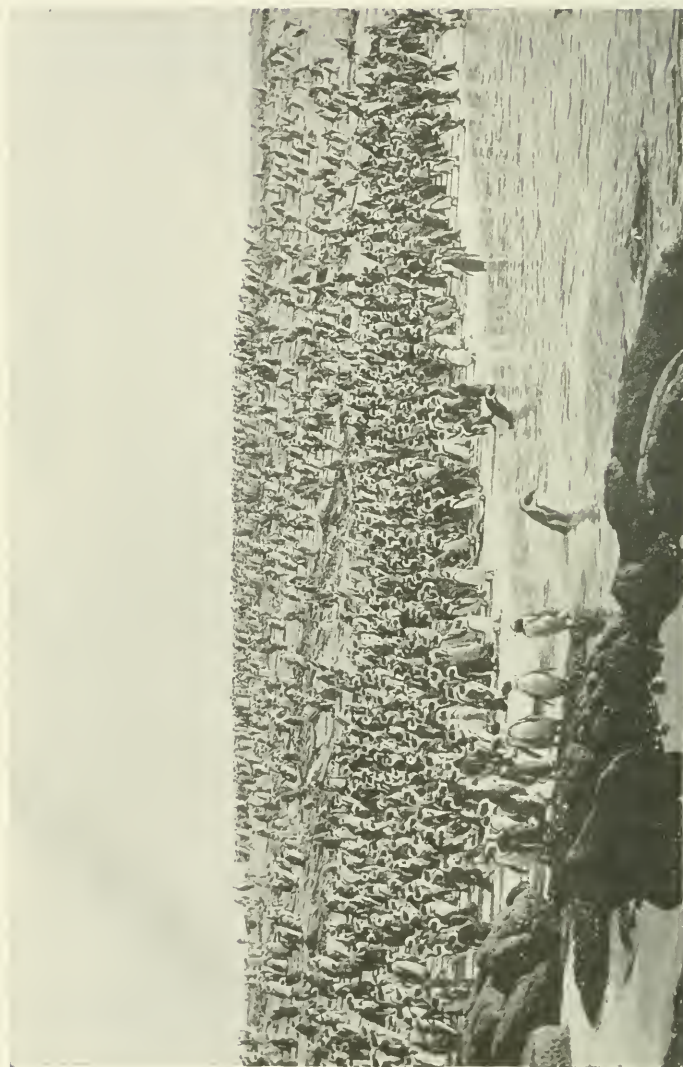


FIG. 146.—Jackass Penguins on Dassen Island. (Photo. M. J. Nicoll.)

is black and white in colour and measures about two feet in length. The bird is, however, easily recognisable from a photograph. It is very common along the South African coast, resorting to the Guano Islands to breed. It dives with great celerity and exists solely on fish which it captures for itself. It is ungainly on land, and either waddles along in an upright position or wriggles on its belly by the aid of its flippers. It obtains its vernacular name from its donkey-like call. The eggs are collected by the Government, and sold as food, being eaten chiefly by the Malays, although many white people acquire the taste for them. The "white" of the egg does not boil opaque, like a hen's egg, but remains of a thick jelly-like substance, although it may be boiled for ten minutes or so.

CHAPTER IX

BIRD-PARASITES

THERE are but two groups or families of *true* parasitic birds in South Africa, viz. the Cuckoos and the Honey-guides. Several of our birds utilise the nests of other members of the Avian class, but as they do not leave their eggs to be incubated by the original or rightful owner, performing this duty themselves, they cannot with justice be included under the heading of “ Bird-Parasites.”

HONEY-GUIDES

The Honey-guides (family *Indicatoridæ*) are a small family of interesting birds, chiefly remarkable for their habit of guiding man and animals to the nests of bees. Their structure, resembling that of the cuckoos in some respects, but more closely according with that of the Barbets, has occasioned some considerable diversity of opinion as to their classificatory position. Originally placed with the cuckoos, they were subsequently elevated to the rank of a separate family. They were also placed in the Barbet family by some authors, a position favoured—amongst others—by F. E. Beddard, F.R.S., the Prosector of the London Zoological Society, who includes them in the Capitonidæ in his excellent work : “ The Structure and Classification of Birds.”

They resemble the Cuckoos in the arrangement of the

toes, the first and fourth being directed backwards, while the two middle ones are projected forwards; in their parasitic habits they also resemble the Cuckoos, but differ in several marked structural characteristics.

The wing is long and pointed, and not as in the Capitonidæ, short and rounded. Primaries nine in number, the first one being almost as long as the second. The bill of the adult is of medium length, fairly stout, and with a slightly swollen formation towards the tip. The young bird (fledgling) has a pair of sharp, strong tooth-like hooks welded on to the end of the bill, one on either mandible. These peculiar appendages apparently fall off when the bird is nearly or fully adult, so we presume the use they have is to assist the young Honey-guide to obtain a firm hold of its foster brethren when ejecting them from the nest hole of the rightful owners of the nest. These hooks on the beak of the young bird are in themselves sufficient to relegate the Honey-guides to a family of their own. The nestling Indicator has the swollen nostrils characteristic of the Cuculidæ, but instead of being rounded as in the Cuculidæ, they are elongated and oval, being more in the shape of slits.

The stories told of the honey-guiding instincts of these little birds are innumerable, dating from the days of Sparrman and Livingstone. They feed principally on insects and honey.

South Africa possesses five species falling under two genera :—

- | | | | |
|----------------------------|----|----|---------------------|
| a. Tail of twelve feathers | .. | .. | <i>Indicator.</i> |
| b. Tail of ten feathers | .. | .. | <i>Prodotiscus.</i> |

The White-cheeked Honey-guide (*Indicator indicator*) is dark brown above, a golden-yellow patch on the shoulder; ear-coverts white, rest of cheek and throat black in the



FIG. 147.—Nestling *Indicator Vericgatus* (Scaly-throated Honey-guide). (Photo. from life by R. H. Ivy.)

male, the latter white in the female ; rest of under surface dirty white. Length, about $7\frac{1}{4}$ inches.

It is widely spread all over the African Continent, but is nowhere exactly common within our borders.

It is thoroughly parasitic in its habits ; we have taken its egg from the nest of the white-throated Swallow (*Hirundo albicularis*), and from the nest-hole of the Wood Hoopoe (*Irrisor viridis*). The egg is oval in shape, and pure creamy white in colour (see centre figure, Row 3, page 276).

The Yellow-throated Honey-guide (*Indicator major*) is olive-brown above, the rump region being white ; ear-coverts black ; throat and breast yellow, the rest of the under surface being creamy-white. Length, 7 inches.

This species is also found in most of the Bush and Forest Regions of South Africa, and is not uncommon in the neighbourhood of Grahamstown. Here Mrs. Barber observed it using the nest-hole of the Black-collared Barbet. We found an egg in the nest of a Drongo-shrike in November, 1894. The bird usually—according to our experience—makes use of the nest-hole of the Pied Starling. It seems as if the Honey-guides occasionally break the eggs of the foster-parent, to make room for their own. In row 2, left centre figure, we give an illustration of the smaller egg of the Honey-guide, along with a clutch of *Spreo bicolor*, two of which are badly smashed.

The Scaly-throated Honey-guide (*Indicator variegatus*) has the forehead mottled, rest of head and neck greenish merging into a bright olive on the back ; throat white streaked with black ; breast yellowish mottled with dusky, giving a scaly appearance to this region ; rest of under-parts yellowish-white. Length, $7\frac{1}{4}$ inches.

It ranges from the south-eastern portion of Cape Province

to Zululand, and has been recently recorded from the Northern Transvaal by L. E. Taylor.

We give an illustration of an unfledged young bird of this species, showing the remarkable development of the beak. This specimen was taken from the nest-hole in a willow-tree, belonging to a pair of Diamond Sparrows (*Petronia petronella*). The Honey-guide had previously been seen in the tree, and we found no young sparrows, these having evidently been ejected by the young Honey-guide.

On one occasion when encamped near the Zwartkops River in the neighbourhood of Uitenhage, one of these birds led us on six different occasions to bees' nests. The bird would come and perch on some tree close to the camp and commence calling "cha, cha, cha," to attract our attention. We followed it as it flitted before us from tree to tree, and eventually located the nest, while the little guide flew round us, keeping in the neighbourhood of the place, but not coming up to the spot.

The Lesser Honey-guide (*Indicator minor*) is of an olive tinge above, greyer on the head and neck; ear-coverts whitish bordered below by a dark stripe; under surface greenish-grey, fading into whitish on the abdomen and under tail-coverts. Length, $6\frac{1}{2}$ inches. It is the commonest and most widely distributed species, being found in all the wooded tracts. Like the other members of the family it goes about singly or in pairs, and feeds on bees, wax, honey and various insects. The Black-collared Barbet is the usual host of this little Honey-guide, and we append a photograph of one of these guides sitting near the entrance to the nest-hole of one of the Barbets; the head of the Barbet may be seen protruding from the aperture. When encamped in a gorge near Bluckrantz in the Uitenhage division of the

Cape Province, we witnessed an instance of the persistence with which the Honey-guides appropriate the nests of other birds. We saw the bird fly to the nest-hole illustrated below, and endeavour to enter. The male Barbet opposed this and was afterwards assisted by his spouse, who fiercely attacked the Honey-guide, pursuing it down the kloof, chattering and fighting all the while. In a few minutes the Honey-guide



FIG. 148.—Lesser Honey-guide at nest hole of Black-throated Barbet.

reappeared and the same thing was repeated for over an hour. We then shot all three of the birds and found the Honey-guide with an egg actually protruding from the oviduct. Two fresh eggs of the Barbet were found in the nest-hole (*vide* Fig. 4, page 276), the centre egg is that of the Honey-guide.

The Brown Honey-guide (*Prodotiscus regulus*) is brown above and white below, the throat and flanks being washed with brown.

This is a rare bird in South Africa.

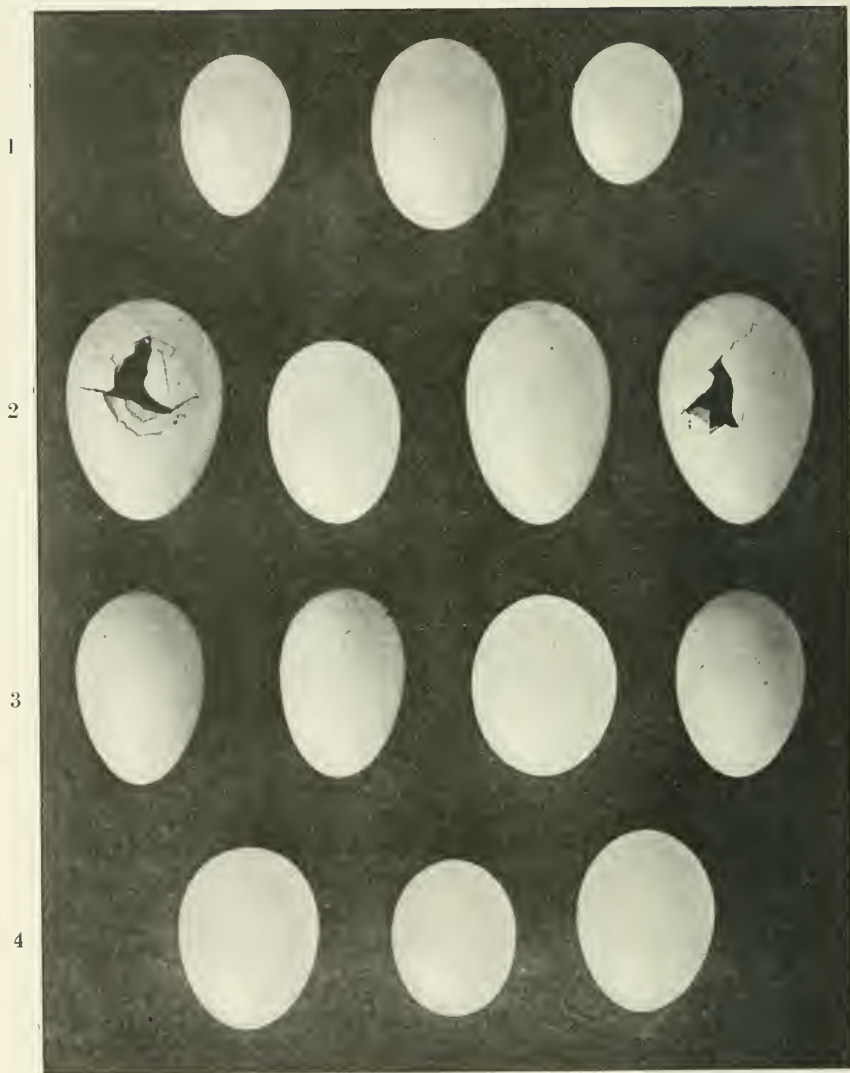


FIG. 149.—Eggs of Honey-guides with those of hosts.

- | | | | |
|----|---------------------------|---------------------|-----------------------------|
| 1. | Egg of Lesser Honey-guide | with those of | Black-collared Barbet. |
| 2. | " " | Yellow-throated do. | " " Pied Starling. |
| 3. | " " | White-checked do. | " " Wood Hoopoe. |
| 4. | " " | Unknown do. | " " White-throated Swallow. |

CUCKOOS

The *true* Cuckoos are a fairly numerous family in South Africa, and form the first Sub-family (*Cuculinæ*) of the Family *Cuculidæ*, the second Sub-family being the Coucals (*Centropodinae*), already dealt with in our chapter of Denizens of the Forest.

The parasitic habits of the Cuckoos were made known to science a good many years ago, and innumerable stories were told of the European Cuckoo (*Cuculus canorus*), many of them exaggerated. So far as our Cuckoos are concerned, they are all true parasites, foisting their eggs upon a variety of birds, from the tiny Cotton-tit to the Black Crow. In many instances the female may lay her egg direct in the nest of the foster-parent, but what happens in the case of the Cappok-vogel? It is physically impossible for even our smallest cuckoo to obtain ingress into the nest, so the only practical hypothesis is that she lays her egg on the ground and conveys it to the nest in her bill. Many instances of this have been witnessed, by reliable observers, in the case of the European Cuckoo. The very masterly essays on the parasitic habits and nidification of the Cuckoos, by the late Professor A. Newton, of Cambridge, are too long to reproduce here, and we must refer the reader, who wishes to understand something of the variation in the colour of the Cuckoo's egg, and the diversity in the selection of the foster-parent, to his admirable "Dictionary of Birds."

There are three genera of the *Cuculinæ* in South Africa, the first two having no crest on the head, but easily distinguishable from one another, the first genus, *Cuculus*, possessing no metallic plumage, while the members of the second genus (*Chrysococcyx*) are strongly metallic in coloration; the third genus (*Coccytes*) has the head distinctly crested.

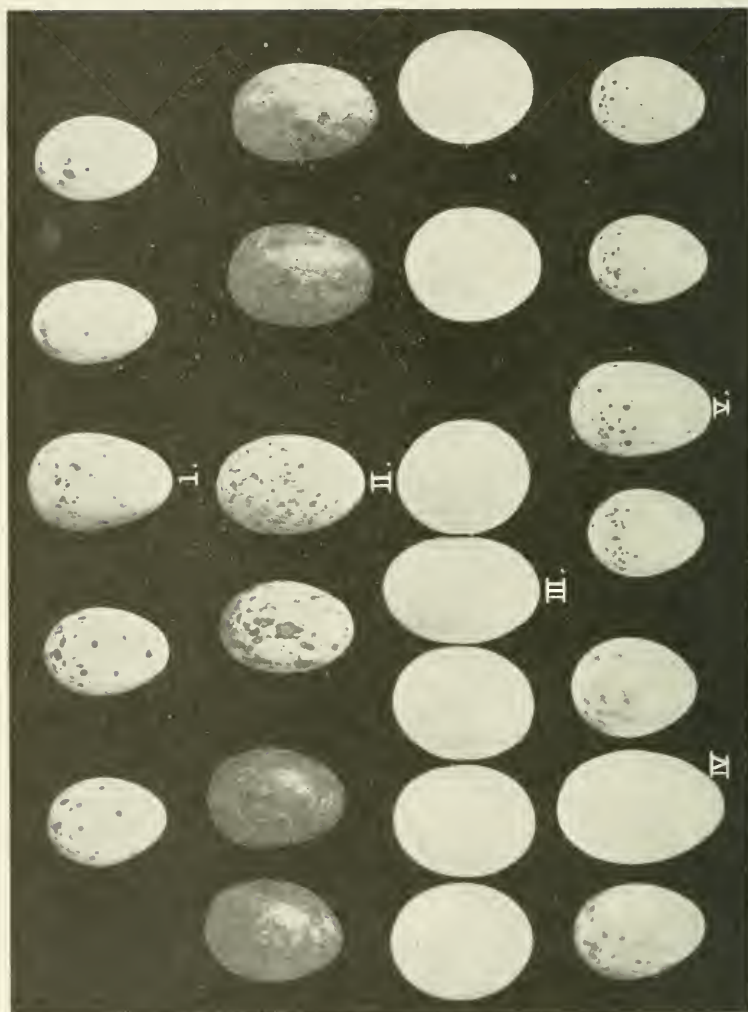


FIG. 150.—Eggs of Cuckoos with those of hosts.

I.	Eggs of Bar-throated Warbler with egg of Bronze Cuckoo.
II.	Cape Sparrow
III.	" " Malachite Kingfisher " " Golden "
IV.	" " Red-vented Tit-babbler " " Golden "
V.	" " Bar-throated Warbler " " Bronze "

The South African Cuckoo (*Cuculus gularis*) is slate-grey above, throat, neck and upper breast pale grey, rest of under surface white transversely and narrowly barred with black. Length, about $12\frac{3}{4}$ inches.

It is a migrant from Northern and Central Africa, being found in South Africa between the months of October to March. It does not inhabit the Cape and is scarce in Natal.



FIG. 151.—Red-chested Cuckoo.

but is otherwise fairly well distributed. It resides in open bush country.

Le Vaillant found its egg in the nests of several birds, and describes it as olive-grey dotted with red.

The European Cuckoo (*Cuculus canorus*) resembles the

foregoing bird rather closely, differing by its almost entire black bill, this being only yellow at the base and slightly



FIG. 152.—Young Red-chested Cuckoo in nest of Cape Rock Thrush.

larger size. Length, $13\frac{1}{4}$ inches. It is a migrant from Europe, as its name indicates.

The Red-chested Cuckoo (*Cuculus solitarius*) is known to the Boers as the "Piet mynvrouw," from its call. It is dark slate above; throat grey, tinged with rufous; lower throat and breast rich rufous, the remainder of the under-parts being pale buff barred with black. Length, $12\frac{1}{2}$ inches.

It migrates to South Africa during our summer, going to Central and Northern Africa when the winter draws near. In the sub-continent its range extends from Cape Town, along the southern portion of the Cape, through Natal to Portuguese South-East Africa.

We have taken its egg—of a peculiar chocolate-brown colour—from the nests of the Cape Robin and the Cape Rock Thrush, these two birds being seemingly the two usual hosts, although Le Vaillant mentions in addition the Noisy Robin-Chat, the Kappokvogel and the Coryphea Warbler; and we have ourselves taken the egg from the nest of the South African Stone Chat. Their eggs may be searched for in November and December. In the photograph of the Cape Rock Thrush (Fig. 10) the dark egg of the Cuckoo is distinctly visible.

The Black Cuckoo (*Cuculus clamosus*) is black glossed with dark green, the tail with a narrow white tip. Length, $12\frac{1}{2}$ to 13 inches.

It is also a summer migrant from North and Central Africa, ranging in South Africa from Port Elizabeth and Albany to the Northern Transvaal and across to South-West Africa. According to Le Vaillant this Cuckoo uses the nests of the Wren Warblers in which to deposit its egg; as these nests are too small for the bird to lay it therein, it probably deposits its egg on the ground and conveys it to the nest in its bill.

We have, on two occasions, taken a pure white egg of this bird from the nest of the Sombre Bulbul, viz. in

December, 1891, and on January 4, 1907—the latter in a bush overhanging a pool of the Bluekrantz River in Featherstone Valley, near Grahamstown. The Cuckoos are all



FIG. 153.—Black Cuckoo.

friends of the farmers, feeding on spiders, insects and caterpillars.

The Emerald Cuckoo (*Chrysococcyx smaragdineus*) is of a bright satiny emerald-green colour above, and below as far as the upper breast; rest of under surface canary-yellow, excepting the under-tail coverts which are white. The female has the head ashy black and the upper surface

barred with rufous ; below white barred with green. Length, 8 to $8\frac{1}{2}$ inches.

It ranges throughout Africa, but is somewhat rare within our limits, occurring from Knysna eastwards. It is an



FIG. 154.—Young Bronze Cuckoo in Sunbird's nest.

inhabitant of thick bush or forest country. It is rare in Albany, but commoner in Pondoland and Natal.

The Woodward's procured two females with shelled eggs in the oviducts, one pure white and the other speckled with purple. We found a young half-fledged bird in a nest of the Cape Sparrow at Koonap (Fort Beaufort).

The Bronze Cuckoo (*Chrysococcyx Klaasi*) male is metallic

green above with coppery and red reflections, below white with a green patch on either side of the chest ; sides of the body barred with black. The female has the head and back



FIG. 155.—Klaas' or Bronze Cuckoo.

of neck brownish ; the green back barred with pale reddish-brown ; below buffish-white barred with narrow lines of dark brown.



FIG. 156.—Young Diedrie Cuckoo in nest of Cape Sparrow.



FIG. 157.—Nest of Red-vented Tit-babbler, with egg of Golden Cuckoo.

In South Africa this bird is a "partial migrant" in some districts, a resident in others. It may also be an African migrant, some going to Central or Northern Africa to spend our winter months. We procured specimens in Grahamstown in June and July—the heart of winter—L. E. Taylor in Barberton, in June, 1905, and C. G. Davies of the Cape Mounted Rifles informs us that it is practically a resident in Pondoland. It is parasitic upon a number of birds, the egg to a large extent varying in colour to mimic that of the foster parent. Pym took a white egg from the nest-hole of the Malachite Kingfisher, which lays white eggs (*vide* Fig. 3, page 278); we have taken eggs from the nests of *Apalis thoracica*, the Cuckoo's eggs resembling those of the Warbler in colour, but differing considerably in size and shape. We also took an egg from the nest of the Larger Double-collared Sunbird, which was very like that of the Black Sunbird, so much so that had the egg been deposited in a nest of the latter bird it would have been a matter of difficulty to have distinguished it from the Sunbird's eggs. We append a photograph of a young *C. Klaasi* in the nest of a Double-collared Sunbird.

The Diedric or Golden Cuckoo (*C. cupreus*) is metallic green with coppery reflections above, a white streak on the centre of the crown, a narrow green band under the eye; under surface white, banded on the sides of the body with green; in the female this barring is more pronounced, extending across the chest.

It is widely distributed in Africa, being a migrant to other climes, arriving in late September or early October, and departing at the end of March or so. It derives its trivial name from its loud plaintive cry of "Dee-dee-dee-deederick." Like the other members of the family, insects and their larvæ—caterpillars, &c.—form its staple diet.

Its egg is subject to still more variation in size, shape and colour than that of the last species so far as our experience goes. We have both taken white eggs—in many cases absolutely authentic. A pure white egg was taken from the oviduct of a female shot at the Crocodile River, District Pretoria; a white egg was also found in the nest of a Cape Wagtail, which was allowed to hatch out to make identity certain: further, we took a white egg from the nest of the little Red-vented Tit-babbler (*vide* Fig. 157). The larger egg is that of the Cuckoo. White eggs have been taken by Messrs. Barber, Le Vaillant and Jackson. The usual host is the Cape Sparrow, both of us having taken the Cuckoo's eggs—coloured like those of the Sparrow—from the nests of this bird. This is borne out by the experiences of Ayres, Millar, Roberts, and Sparrow (*vide* Fig. 150). The next commonest host is perhaps the Masked Weaver (*Hyphantornis velatus*). We took several eggs from their retort-shaped nests resembling those found in the Sparrow's nests.

Fitzsimons records having taken a blue egg from the ovary of a female, so it will thus be seen that the evidence regarding the variation of colour, &c., in the egg of this bird is indisputable. In March, 1903, we took five young Cuckoos from the nests of sparrows and seven more in January, 1906, from the nests of the Sparrow and the Spotted-backed Weaver. We append a photograph of a young Cuckoo in a sparrow's nest, partly broken to show the Cuckoo.

The next five species are all crested birds, the largest being the Great Spotted Cuckoo (*Coccyzus glandarius*), which is a migrant from South Europe, North Africa, and West Persia.

It is slatey-brown above, the wing-coverts, &c., being

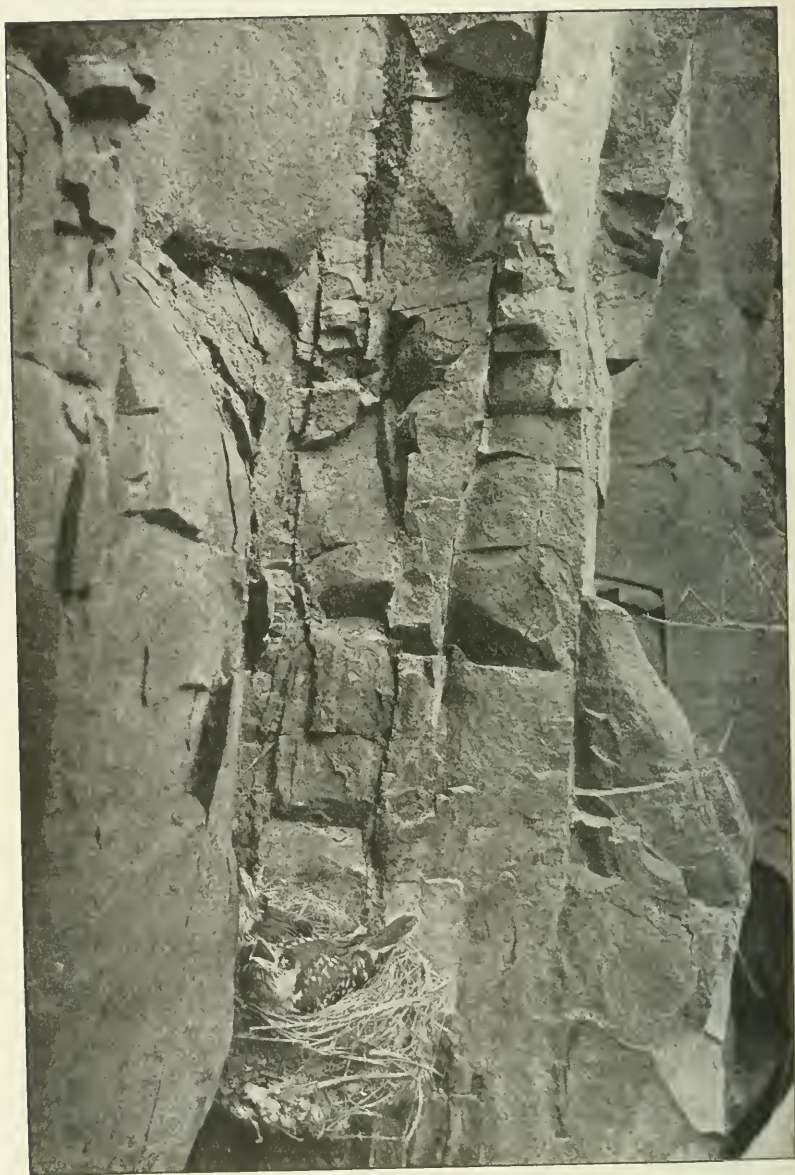


FIG. 158.—Two young Great Spotted Cuckoos in nest of Red-wing Starling.

tipped with white, giving a spotted appearance to this region; throat and upper breast pale ochre-yellow, rest of under-parts white. Length, $14\frac{3}{4}$ inches.

It has a harsh cry and feeds on caterpillars and insects. Some years it is plentiful in the Beaufort West and Albany Divisions of the Cape; at other times it does not put in an appearance at all. It commonly utilises the nesting-places of the Red-winged and Pied Starlings, and the nest of the Black Crow. It favours certain nests each year; when the Cuckoos arrive these nests will invariably be found to contain an egg or two, while other nests of the same species close by will not be noticed by them. This is the only kind of cuckoo we know of with instances of two young in a single nest (*vide* Fig. 158), or which occasionally permit the young of the foster-parents to live; we have found a young Spotted Cuckoo and a young Red-wing just ready to fly, in the same nest. The egg of this Cuckoo is of a pale dull blue spotted with black.

The Black and White Cuckoo (*Coccyzus jacobinus*) is glossy black with greenish reflections above; a white band across the wing, below white washed with pale buff.

The exact range of this bird within our limits is uncertain, it having been so frequently confused with the succeeding species. A. D. Millar found the white egg of this species on three occasions in the nest of the Fiskal Shrike.

The Black and Grey Cuckoo (*Coccyzus hypopinnarius*) closely resembles the foregoing bird, but has the under-parts of a slate-grey colour, the sides of the neck and breast suffused and slightly streaked with black. Length, $13\frac{1}{2}$ to $13\frac{3}{4}$ inches.

Its range seems to be fairly general in South Africa, as we have procured specimens in the Beaufort West and

Albany Divisions of Cape Province and at Modderfontein and Waterval North, Transvaal. At the latter place they were exceedingly common in February amongst the thorn scrub about two miles from the Aapies River, often indulging in a harsh, laughing cry. They go about in pairs and feed largely on hairy caterpillars, and various insects. This bird lays a white egg. In this connection we give an illustration of a Sombre Bulbul at nest ; this nest contained four cuckoo eggs, besides the two marbled eggs of the rightful owners, who were flitting about excitedly in the vicinity of their over-loaded nest. Close by were three Cuckoos (*Coccystes hypopinarius*, *C. serratus*, and *Cuculus clamosus*), and judging by the various shapes and sizes of the cuckoos' eggs we have no doubt that all three birds had utilised the one small nest. We also on two occasions took the egg of this cuckoo from the nest of the Yellow-shouldered Cuckoo-Shrike, and one from the nest of the Cape Bulbul.

There is another rarer species (*C. caffer*), resembling the preceding bird rather closely, being however a little larger, and having the slate-grey of the previous replaced by white. Nothing is known of its breeding habits.

The Black-crested Cuckoo (*Coccystes serratus*) is black glossed with green above and below, relieved only by a white band on the wing.

It also lays a white egg, and uses the nests of various birds as a repository. The Cape Bulbul (*Pycnonotus capensis*) is, however, the usual host according to Atmore. We took an egg from the nest of the Red-faced Mouse-bird.

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